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THESIS

INTELLIGENCE REFORM AND IMPLICATIONS FOR NORTH KOREA'S WEAPONS OF MASS DESTRUCTION PROGRAM

by

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13. ABSTRACT (maximum 200 words)

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Three reform sets should significantly improve U.S. understanding of North Korea's WMD programs. Collection reforms should allow intelligence agencies to gather more information to gain increased insight into Pyongyang's WMD programs. Analysis reforms will develop alternative methods and create streamlined procedures to avoid failures such as those witnessed in Iraq. Collaboration reforms should enable the Intelligence Community to shed its "stovepipe" mentality, facilitating unity of effort in reducing intelligence gaps on North Korea's dangerous programs.

Intelligence reform, while necessary, is insufficient to deal with the North Korean threat. An engagement strategy could help the Intelligence Community better understand North Korea and its WMD programs by bringing Pyongyang into the international fold and lowering its isolationist tendencies. Engagement could increase intelligence collection opportunities and give decisionmakers more relevant information yielding better decisions and improved counterproliferation efforts. Finally, ongoing reforms should better equip policymakers to tackle broader issues such as terrorism and counterproliferation.

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INTELLIGENCE REFORM AND IMPLICATIONS FOR NORTH KOREA'S WEAPONS OF MASS DESTRUCTION PROGRAM

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ABBREVIATIONS AND ACRONYMS

ACC	Air Combat Command
ACH	Analysis of Competing Hypothesis
AIA	Air Intelligence Agency
BW	Biological Weapons
CFO	Chief Financial Officer
CIA	Central Intelligence Agency
CW	Chemical Weapons
DCI	Director of Central Intelligence
DNI	Director of National Intelligence
DOD	Department of Defense
DPRK	Democratic People's Republic of Korea
FIRE	Future Intelligence Requirements Environment
GKB	Geospatial Knowledge Base
GWOT	Global War on Terrorism
HDBT	Hard and Deeply Buried Targets
HUMINT	Human Intelligence
IA	Information Assurance
IAEA	International Atomic Energy Agency
IMINT	Imagery Intelligence
ISR	Intelligence, Surveillance, and Reconnaissance
MASINT	Measurements and Signatures Intelligence
MOE	Measure of Effectiveness

NCPC	National Counterproliferation Center
NCTC	National Counterterrorism Center
NGA	National Geospatial-Intelligence Agency
NIE	National Intelligence Estimate
NSA	National Security Agency
OSINT	Open Source Intelligence
OIF	Operation Iraqi Freedom
OEF	Operation Enduring Freedom
SAE	Senior Acquisition Executive
SECDEF	Secretary of Defense
SES	Senior Executive Service
SIGINT	Signals Intelligence
WMD	Weapons of Mass Destruction

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I. INTRODUCTION

A. THE INTELLIGENCE REFORM DEBATE

One of the most often quoted tenets from Sun Tzu's The Art of War is "know your enemy and know thyself, in a hundred battles you will never be in peril."[1] The primary goal of intelligence is to understand the intentions and capabilities of adversaries in order to provide critical information to decisionmakers. The Intelligence Community has come under intense scrutiny over the last few years as policymakers try to find out what we knew and when we knew it to see if the terrorist attacks on 9/11 could have been prevented. Critics of the Intelligence Community state that the intelligence apparatus has done a sub-standard job of knowing the enemy. The various intelligence "failures" identified by the critics in the last few years are: the inability to detect the Indian nuclear test in 1998, a National Intelligence Estimate (NIE) that incorrectly stated North Korea was at least ten years away from fielding an intercontinental ballistic missile,[2] most recently the 9/11 terrorist attacks, and the October 2002 NIE that incorrectly declared Iraq possessed weapons of mass destruction (WMD) and was actively rebuilding its nuclear program.

The Intelligence Community needs to undergo a significant transformation to meet the challenges of 21st century adversaries who are gaining more skilled in their use of asymmetrical warfare. North Korea is one of these adversaries. Famously labeled by President Bush as one of the members of the "Axis of Evil," the Democratic People's Republic of Korea (DPRK) poses a real threat to the United States and its allies. The North Korean nuclear program is one of the most dangerous issues now facing the Pacific region and the international community. The continued development of the North Korean nuclear weapons program, as well as its biological and chemical weapons programs, also has significant and precarious implications on United States strategy and policy. The recent diplomatic effort of the United States regarding North Korea, and

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[1] Sun Tzu, *The Art of War* (New York: Oxford University Press, 1963), 84.

[2] Frank Carlucci, ed., *Taking Charge: A Bipartisan Report to the President Elect on Foreign Policy and National Security* (Santa Monica, CA: Rand Corporation, 2000), 261.

North Korean government statements about the validity of its nuclear program has brought the nuclear issue back to the front pages of newspapers. Currently, the United States has elements of a strategy in place to deal with the North Korean nuclear issue, although until recently, this issue has not been a priority with the Bush administration.

B. THE NORTH KOREAN WMD THREAT: IT IS REAL

The North Korean nuclear program is of grave concern because North Korea's nuclear aspirations could encourage other nations, such as neighboring Japan and South Korea, to develop their own nuclear weapons. This raises the possibility of a significant change in the balance of power in any region of the world. The current nuclear crisis began in December 2002, when North Korea announced its intent to renege on the 1994 United States-North Korea Agreed Framework and restart its nuclear reprocessing facilities at Yongbyon. In January 2003, North Korea sent notification to the International Atomic Energy Agency (IAEA) and the United Nations Security Council that Pyongyang was withdrawing from the Non-Proliferation Treaty. North Korea finally admitted to possessing nuclear weapons in April 2003 and offered veiled threats of possible exporting of nuclear materials. The exact number of weapons it may have is hard to know, but the Central Intelligence Agency (CIA) has estimated that North Korea has one or two nuclear bombs that were assembled with plutonium reprocessed between 1989 and 1991,[3] and it is unknown if these have been weaponized. In October 2004, North Korea stated that in June it had completed the reprocessing of the 8,000 spent fuel rods previously monitored under IAEA safeguards.[4]

Additionally, there is a possibility of North Korea selling nuclear weapons or nuclear-related technology to terrorist elements intent on causing harm to Americans or American interests. This is a scenario that must not be taken lightly. Recent allegations of North Korea having sold processed uranium to Libya only heighten the fear of such a

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[3] "North Korea Nuclear, Biological and Chemical Program Overview: History and Status," *Nuclear Threat Initiative Online*, http://www.nti.org/db/profiles/dprk/NKN_OGO .html (accessed June 2005).

[4] DCI Weapons Intelligence, Nonproliferation, and Arms Control Center, "Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions: 1 July - 31 December 2003," http://www.cia.gov/cia/reports/721_reports/july_dec2003.htm (accessed July 2005).

scenario coming to fruition. Reports state that international inspectors tested approximately two tons of uranium material that Libya surrendered to the United States in 2004 when it abandoned its nuclear program, and that there was a ninety percent certainty that the processed uranium sold to Libya did in fact come from North Korea.[5]

Of equal concern are North Korea's biological and chemical weapons programs, which pose an immediate threat to American interests in the Pacific region because of the close proximity to friendly military forces on the peninsula. A North Korean biological or chemical attack on a friendly military or civilian installation would have devastating effects on coalition military operations and readiness, and would cause extreme panic that could effectively halt recovery operations. The problem is that the United States does not have much information on their dangerous unconventional weapons programs, and there are too many intelligence gaps that exist on North Korea as a whole which prevent United States policymakers from gaining a comprehensive picture of the intentions of this rogue nation. North Korea has been described as possessing a "dedicated, national-level effort to achieve a biological weapon capability and has developed and produced, and may have weaponized, biological weapon agents in violation of the [Biological and Toxin Weapons] Convention."[6] It is assessed to have anthrax, botulism, plague, cholera, yellow fever, hemorrhagic fever, smallpox, and typhoid. The North Korean chemical weapons program is just as problematic. It is assessed to have 2,500 to 5,000 tons of chemical agents, primarily mustard, sarin, phosgene and V-series nerve agents.[7]

North Korea's possession of weapons of mass destruction poses a threat to America's interests in the region. But why there is so little information about North Korea's unconventional weapons program? The Intelligence Community must prevent a repeat of the problems in uncovering Iraq's weapons of mass destruction. Chapter II examines why North Korea is such a difficult intelligence problem and why the

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[5] "Report: N. Korea May Have Sold Uranium," *ABC News Online Service,* 2 February 2005, http://abcnews.go.com/ International/wireStory?id=464528, (accessed February 2005).

[6] "North Korea Nuclear, Biological and Chemical Program Overview: History and Status," *Nuclear Threat Initiative Online*, http://www.nti.org/db/profiles/dprk/NKN_OGO .html (accessed June 2005).

[7] Joseph S. Bermudez Jr., "The Democratic People's Republic of Korea and Unconventional Weapons," in *Planning the Unthinkable*, ed. Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, (New York: Cornell University Press, 2000), 191.

isolationist country continues to pursue weapons of mass destruction. This part of the thesis will also discuss more of what we know and what we do not know about their unconventional weapons program, and whether or not the United States possesses the intelligence apparatus to truly decipher the North Korean threat.

The North Korean issue is inherently difficult to understand. The insular nature of North Korea prevents the United States and other allies from truly understanding the real intentions of this isolationist country. It is incumbent upon the United States to deal with the North Korean situation now before the crisis moves past a point of no return. Six-party talks between the United States, China, North Korea, South Korea, Japan, and Russia aimed at diffusing the nuclear crisis had been on hold since June 2004. North Korea announced on 10 February 2005 that it officially has developed nuclear weapons and that it was debating a return to the six-party talks, but only if certain criteria were met. North Korea has only recently agreed to return to the fourth round of nuclear talks, after the United States clarified its positions to the North Koreans to recognize North Korea as a sovereign state, not to invade the country, and to hold bilateral discussions within the framework of the six-party talks.[8]

Negotiations resumed at the end of July 2005, but there was no cause for optimism as the talks concluded with no agreement. During those negotiations, the United States presented to North Korea evidence that the North Koreans clandestinely procured uranium enrichment technology from the A.Q. Khan network. American officials shared the intelligence with North Korea in order to convince Pyongyang that disarmament discussions must include the nuclear weapons program it has touted, but also a second program that it now says does not exist.[9] A new round began in September 2005, with North Korea making more demands which threatened to push the talks into further disarray. In what has been cautiously touted as a breakthrough in the crisis, North Korea ultimately agreed to dismantle its nuclear weapons program in return for economic

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[8] "N. Korea Agrees to Rejoin Nuke Talks," *CNN Online News Service*, 10 July 2005, http://www.cnn.com/ 2005/WORLD/asiapcf/07/09/koreas.nuclear.ap/index.html, (accessed July 2005).

[9] David E. Sanger and Jim Yardley, "U.S. Offers N. Korea Evidence That Nuclear Secrets Came From Pakistani's Network," *New York Times Online News Service*, 28 July 2005, http://www.nytimes.com/2005/07/29/ politics/29korea.html (accessed July 2005).

assistance and security guarantees. However, the Bush administration is dealing with this breakthrough with skepticism, as the DPRK lashed out with aggressive statements accusing the United States of planning a nuclear attack just four days after agreeing to end the nuclear crisis. The tenuous situation on the peninsula highlights the fact that the longer it takes to unearth intelligence on North Korea's unconventional weapons capability, the more unprepared our forces will be when and if the situation escalates to a military confrontation.

C. INTELLIGENCE REFORM INITIATIVES

So how does the United States gain an understanding of this complex North Korean threat? To truly understand the implications of this situation, to make quality intelligence assessments, and to assist in counterproliferation efforts to protect friendly assets and personnel, an enemy's intentions and capabilities need to be clearly understood. This requires timely, tailored, and accurate intelligence information. It is the job of the Intelligence Community to decipher the capabilities and intentions of North Korea, and be able to articulate those intentions to the country's decisionmakers, both military and civilian. However, the Intelligence Community has had their share of problems staying one step ahead of our adversaries. The failures of the Intelligence Community have become front page news worldwide, and those failures have been politicized to the point of intelligence reform being a prominent issue in the 2004 presidential election. How the Intelligence Community should or should not operate has become commonplace in public debate like no other time in the nation's history. The Intelligence Community as an entity has suffered from numerous problems: too many layers of bureaucracy and redundancy, an unending amount of "stovepipes" that exist throughout the various intelligence agencies, and not enough crosstalk or coordination between the agencies. There have been a number of initiatives that have been proposed to enact reform in the Intelligence Community, outlined in the 2002 National Security Strategy of the United States, the Department of Defense Transformation Goals, the 9/11 Commission Report, the Intelligence Reform and Terrorism Prevention Act of 2004, and the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction. The goal of all of these proposals and reform initiatives is to make

the Intelligence Community and its fifteen intelligence agencies a more efficient and successful entity at the strategic, operational, and tactical levels. Chapter III of the thesis will discuss in detail a few of the more critical intelligence reform initiatives currently ongoing in the Intelligence Community.

As it was brought to light in many of these documents, the Intelligence Community is not adequately organized to provide the type of comprehensive and detailed intelligence information that is necessary for the United States to combat threats such as North Korea's unconventional weapons programs, their nuclear ambitions, and their proliferation efforts. The United States Intelligence Community in its current configuration must be revamped in order to be prepared for the dynamic threats of the 21st century. Until intelligence reform becomes a real priority within the government, there will always be problems with unity of effort in filling in the intelligence gaps that exist on difficult threats throughout the world. Interestingly, there are a number of senior level intelligence and Department of Defense officials who do not think that too much change is necessary for the Intelligence Community. Those who hold this viewpoint believe that change for the sake of change will not give us any better intelligence data, and that a complete overhaul of the Intelligence Community in a time of war could have detrimental effects on military operations.

Numerous transformation and reform efforts at various intelligence agencies such as the CIA and the National Geospatial-Intelligence Agency (NGA) are ongoing and will be discussed in Chapter III. The CIA has endured extensive criticism for their failure to uncover intelligence on Iraq's WMD program, and as a result, it has recently gone through a number of significant changes in their human intelligence (HUMINT) operations to ensure that another failure does not occur. The NGA has also been transforming their imagery intelligence (IMINT) operations to streamline efforts to ensure warfighters and policymakers get their products quickly and in a user-friendly format.

A significant portion of the chapter will focus on the extensive transformation efforts that have occurred at the National Security Agency (NSA) which were designed to move the secretive signals intelligence (SIGINT) and information assurance agency from

a Cold War posture to a dynamic 21st century information warfare mentality. In 2000, Congress reported that NSA was in danger of starting the new century without the technological infrastructure and human resources needed even to maintain the status quo, much less meet emerging challenges.[10] Faced with the threat of becoming irrelevant in the information age, NSA went through a dramatic reform effort to streamline its intelligence operations to go up against a much different enemy than they had faced for almost 50 years. The transformation ongoing at NSA is an excellent example of how intelligence reform efforts can produce positive results that ultimately will help us to better understand and eventually defeat our adversaries.

D. A REVAMPED INTELLIGENCE COMMUNITY TO UNDERSTAND NORTH KOREA'S WMD PROGRAM

The restructuring of the Intelligence Community should help the United States gain increased capabilities to better understand challenging threats such as North Korea. But exactly how will the changes ongoing in the Intelligence Community help to provide quality intelligence on North Korea's weapons of mass destruction program? Chapter IV will explore this question, looking at the reforms within the categories of intelligence collection, intelligence analysis, and intelligence collaboration. Many of the intelligence agencies are currently undergoing transformational efforts to better understand the intentions and capabilities of adversaries such as North Korea and terrorist elements such as Al-Qaeda. Recently appointed Director of National Intelligence (DNI) John Negroponte has a difficult road ahead. This will be the largest restructuring of the Intelligence Community in its history. There are many things that need to be done in order to help enhance the capabilities of the Intelligence Community apparatus. It will be Negroponte's job to bring together a relatively disjointed assortment of intelligence agencies and elements, in addition to fighting a turf war with Secretary of Defense Donald Rumsfeld and the Department of Defense (DoD), who controls approximately eighty percent of the overall intelligence budget. The DNI stated that he will have to

[10] U.S. Congress, "Senate Report 106-279 - Authorizing Appropriations for Fiscal Year 2001 for the Intelligence Activities of the United States Government and the Central Intelligence Agency Retirement and Disability System and for Other Purposes," 4 May 2000, 5. This report can be found at http://thomas.loc.gov/cgi-bin/cpquery/T?&report=sr279&dbname=cp106& (accessed August 2005). Hereafter referred to as "Senate Report 106-279."

"ensure that this community works as an integrated, unified, cost-effective enterprise…to provide the President, his cabinet, the armed services, and the Congress with the best possible intelligence product – both current and strategic – on a regular basis."[11]

Significant changes within the various intelligence collection disciplines must occur in order to provide more insight into North Korea's unconventional weapons programs. A restructured Intelligence Community will place an increased focus on HUMINT to gain information. Although this is not an easy task by any means, HUMINT-derived information can provide keen insight into North Korea's capabilities and intentions on their weapons programs. President Bush recently ordered the CIA to increase the number of spies by fifty percent and to double the number of agents in the research and development department tracking weapons of mass destruction.[12] A new emphasis on open source intelligence (OSINT) will hopefully give analysts a better perception of the inner workings of North Korea from what is disseminated through its media outlets. IMINT and SIGINT analysts in a restructured Intelligence Community may have the most difficult challenge. As a result of a recently passed bill in the House of Representatives will make NGA and NSA work even harder to uncover information on North Korea's numerous hard and deeply buried targets. The 2006 Intelligence Authorization Bill decreases or eliminates funding for a small amount of extremely expensive satellite programs. Congressional critics of the satellite programs claim that the programs "have been set on a 'disastrous path' of delays and overspending by mismanagement and 'sloppy performance,'"[13] so these programs must be curtailed. Additionally, from a legal standpoint, the revamped Intelligence Community will have to push the envelope in terms of what they are allowed to do within the confines of legality. To gain knowledge of North Korea's most coveted military and government secrets, the

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[11] John D. Negroponte, *Statement Before The Senate Select Committee on Intelligence*, Nomination Hearing of Ambassador John D. Negroponte to be Director of National Intelligence, 12 April 2005, 1. A copy of the statement can be accessed at http://intelligence.senate.gov/0504hrg/ 050412/negroponte.pdf (accessed August 2005).

[12] "Bush Tells CIA to Get More Spies," *AP Online News Service*, 27 November 2004, http://news.yahoo.com/news?tmpl=story&u=/afp/20041127/ts_alt_afp/us_attacks_intelligence_041127170956 (accessed July 2005).

[13] Shaun Waterman, "House Cuts Intelligence Satellite Funds," *UPI Online News Service*, 11 July 2005, http://washingtontimes.com/national/20050710-110049-3641r.htm (accessed July 2005).

Intelligence Community will have to explore all avenues to gain access to information, and that may entail going closer to the line of legality than we ever have before.

The key cog in many of the intelligence reform initiatives is the intelligence analyst. The United States must ensure that intelligence analysts have the tools necessary to effectively and efficiently complete the intelligence mission. Current initiatives within intelligence analysis are also being designed to ensure the credibility and reliability of the analytical products as to avoid the faulty intelligence analysis seen in the Iraq WMD scenario. New procedures that encourage differing analytical assessments instead of waiting for or pushing for community consensus on tough issues will go a long way to gaining a better overall understanding of the North Korea unconventional weapons problem. The challenge with today's Intelligence Community is that it is difficult trying to coordinate analytical efforts between fifteen different intelligence agencies and organizations, all with varying missions and customers.

Intelligence reform efforts should ensure that collaboration and cooperation between analysts and agencies is easier to do; the mindset of the Intelligence Community must change from a mantra of "need to know" to one of "need to share." Collaboration will lead to filling in the intelligence gaps that exist on the North Korean problem set by reducing the duplication of effort of varying agencies and increasing unity of effort to come up with sound solutions that can be used by military and civilian decisionmakers. Once the analysts gather the information, analyze it, and tailor it into actionable intelligence, they must be given the opportunity to present that information to decision-makers. Evidence suggests that some policymakers failed to listen to warnings from intelligence experts regarding how the Coalition forces would be greeted upon their arrival after the liberation of Iraq.[14] This issue is an example of the serious credibility problem that exists for the Intelligence Community. Decisionmakers must trust that the intelligence they are receiving is good intelligence. There must also be a better mechanism to create a quicker, more streamlined intelligence dissemination process to

[14] Anthony H. Cordesman, "The Lessons of the Iraq War: Summary Briefing," Center for Strategic and International Studies, Washington, DC, 15 July 2003, 24.

ensure the right information gets to the right people at the right time. Efforts to ensure more collaboration throughout the Intelligence Community will help to solve this problem.

If the Intelligence Community continues to have credibility problems, policymakers will not listen when the next crisis occurs and make decisions based on faulty or non-existent intelligence. A lack of credibility within the Intelligence Community could potentially have devastating effects on national security in a North Korea scenario, and every effort must be made to correct this problem immediately. By looking at intelligence reforms through the lens of collection, analysis, and collaboration, I will show how these changes within the Intelligence Community could lead to better insight on the North Korea WMD program, ultimately furthering the goal of gaining more awareness of North Korea's overall capabilities and intentions. The case of Libya serves as a solid example of gaining quality intelligence on a country's WMD program. Accurate intelligence allowed the United States to compel Libya to cease its WMD efforts. The more that is known about the DPRK unconventional weapons program, the better chance the United States has in possibly getting North Korea to one day follow Libya's example and dismantle its dangerous program.

E. CONCLUSION

As stated earlier, the North Korea situation is not an easy one to decipher. Chapter V will review the main findings and implications of the thesis, again looking at the reforms in three major categories of intelligence collection, analysis, and collaboration. I will also conclude by briefly postulating that intelligence reform, while a good start, might not be enough to gain a better sense of North Korea and their intentions towards the United States and the international community. The second part to gaining a better understanding of the North Korea problem set is to look at the strategy and policy currently in place from the viewpoint of the Intelligence Community. The United States has a number of strategy options to deal with this growing threat in North Korea. Coercive diplomacy, preemptive or preventive war, economic sanctions, or status quo are all options that the United States has at it disposal. These strategy options that are of a negative persuasion have proved to be ineffective thus far, and further push the DPRK

into isolation. A strategy based on these options may not adequately address the critical issues at stake on the peninsula and beyond, in light the intelligence gaps that exist on North Korea's WMD program. This is certainly not to insinuate that intelligence creates policy. But in the case of North Korea, intelligence could benefit from a different policy that what is currently being executed.

A strategy of engagement with North Korea could help the Intelligence Community to more effectively use the resources at its disposal to understand the capabilities and intentions of Kim Chong-il's regime. The most important part of developing an engagement strategy with North Korea is that engagement will have the added benefit of helping provide intelligence access to uncover North Korea's unconventional weapons assets. If the insular North Korea comes into the light of the international community, the United States and its coalition partners will be able to be in a better position to reduce the amount of intelligence gaps that exist on North Korea and its military capability. As we become better able to understand the North Korea threat with good intelligence, policymakers will be able to refine the strategy, which can lead to more comprehensive and fruitful relations with North Korea, and a more stable international community.

Finally, I will conclude the thesis by briefly looking at some of the other challenges that face the Intelligence Community, such as Iran, the Global War on Terrorism (GWOT), and weapons proliferation. As DNI Negroponte stated regarding the Intelligence Community, "even if we cannot know every fact or predict every threat, by working more closely and effectively as a team, we can be more specific about what we do not know, and this is critical…it's the only way we can pinpoint gaps in our knowledge and find ways to fill them."[15] I will examine how the intelligence reforms discussed in this thesis might have an effect on these other complex problem sets that the Intelligence Community has to solve.

The critical importance of intelligence in warfare has rarely been disputed. Gaining an advantage over our adversaries is of the utmost importance. As stated in the

[15] Negroponte, 5.

2002 National Security Strategy of the United States, "intelligence – and how we use it – is our first line of defense against terrorists and the threat posed by hostile states."[16] The difficulty in combating terrorism and other emerging threats like North Korea lies in the fact that the Intelligence Community has had difficulty transforming from a single enemy focus in the bipolar world of the Cold War era to a world with multiple dangerous nation-states with nuclear aspirations, terrorist groups that use asymmetric warfare, and mounting homeland security issues. The sheer volume of information now available to intelligence professionals to collect, analyze, and disseminate to military and policy decisionmakers to keep the nation, its military forces, and its allies safe only makes this Intelligence Community transformation task more problematic. Time will tell if the reform effort will take root within the Intelligence Community. However, the current intelligence reforms designed to make the Intelligence Community a more effective entity should help the United States to gain a better sense of what the true state of the DRPK unconventional weapons program is, thus preventing another Iraqi WMD failure – a failure that could ultimately cost numerous American and coalition lives and could have serious and long-lasting international and regional repercussions.

[16] The White House, *The National Security Strategy of the United States of America*, Washington, DC, September 2002, 30. Hereafter referred to as *National Security Strategy 2002*. A copy can be found at http://www.whitehouse.gov/nsc/nss.pdf (accessed July 2005).

II. THE NORTH KOREAN WMD THREAT: IT IS REAL

A. INTRODUCTION

The date is March 2007 – intelligence reports state that the North Korea military has been engaging in an unprecedented level of combined exercises in the midst of its winter training cycle. The exercises have continued for almost a week. This strikes the Intelligence Community as odd because there have been no reports of any type of combined training for almost 10 years. IMINT has uncovered some increased activity at the Yongbyon nuclear facility, which has been active for the last two years after the last failed round of six-party talks in July 2005. Additional intelligence reporting has chronicled the continued decline of Kim Chong-il's health after suffering a stroke the previous year. He has stated numerous times that he wanted to see "a unified Korea under one rule by whatever means necessary" before his death.

The United States military responded to the increased activity in North Korea by deploying additional forces to the region as a show of force. Repeated efforts from the United States and the rest of the international community to ease tensions on the peninsula have been unsuccessful. Combined U.S. Air Force and Navy exercises were conducted in response to North Korea's continued military activity, and Army and Marine Corps units were sent to reinforce the demilitarized zone. A SIGINT intercept revealed that Kim Chong-il informed his military commanders that "victory against the imperialist aggressors will come at any cost" and that a "grand surprise awaits the imperialists." Attempts to corroborate the SIGINT with human HUMINT information proved unsuccessful since HUMINT sources in the isolationist country had decreased by more than fifty percent over the last few years. Interrogation of a North Korean nuclear scientist who defected to the United Kingdom in 2006 had turned up little information of significant intelligence value. North Korea increased the political rhetoric, insisting to the international community that any actions taken by North Korea were done solely in self-defense in response to aggressive posturing from the United States and its allies. The United Nations (UN) urged all parties to use restraint during the crisis.

In early November 2007, on a routine air reconnaissance patrol, an American U-2 plane was targeted by the radar of a North Korea surface-to-air missile system. The North Koreans did not fire at the U-2, but the North Koreans claimed that the U-2 had invaded its sovereign airspace. The United States and its allies took this action as an aggressive attempt on the part of the North Koreans to escalate the conflict. The United States urged the U.N. to take action against the rogue nation before the conflict reached a point of no return. The North Korean military continued their exercises, began to move an unusual amount of firepower into the demilitarized zone (DMZ), and called up its military reserve forces. The U.N., led by the United States, South Korea, and the United Kingdom, gave North Korea seven days to stand down its military exercises, its provocative activity at the Yongbyon facility, and return ground troops at the DMZ back to garrison locations. On the fourth day of the ultimatum, three United States and South Korean military hospitals reported seeing military and civilian patients with skin irritations and blisters that had been bothering them for a couple of days. That same day, two Air Force sergeants working on the flightline of a coalition airbase reported to the hospital complaining of flu-like symptoms with sore throat, muscle aches, and fever. Over the next two days, they rapidly developed severe respiratory problems and fell into shock. The two sergeants died on the sixth day of the U.N. ultimatum. Military and civilian bio-weapons analysts finally determined that three military facilities in South Korea and one installation in Japan had been attacked with anthrax. The official cause of death of the two sergeants was listed as severe internal bleeding from inhalation anthrax. Intelligence reporting surmised that North Korean special operations forces had infiltrated into the southern peninsula and into Japan and launched an anthrax attack on the four military facilities.

As the news of the deaths of the two sergeants was leaked to the press, panic throughout the peninsula began to ensue. Military and civilian medical clinics were besieged by hundreds of personnel claiming to have symptoms consistent with an anthrax attack. All bases immediately went to chemical warfare preparations. One of the bases responsible for launching offensive operations against the north found over fifty percent of their operations personnel either in the clinic with inhalation and cutaneous anthrax

symptoms or tending to dependents and family members with the same symptoms. Military operations over the next three days at all four bases slowed to minimal capacity. Over forty percent of military personnel supporting offensive operations had been hospitalized for possible exposure to anthrax spores; thirty pilots and six flag-level officers were among the casualties. Hospitals began to run out of antibiotics that were being used to treat those exhibiting symptoms of anthrax exposure. Reinforcements were deployed to the peninsula and Japan to help augment those injured. Military dependents on the peninsula were evacuated as the number of casualties from the chemical attacks rose to two hundred military and civilian personnel. Intelligence reports described a massing of North Korean troops all along the DMZ. However, coalition forces found it increasingly difficult to prepare for military operations against North Korea because of the limited amount of mission-ready personnel available for duty. Major cities on the Korean peninsula began to evacuate its citizens causing widespread chaos and clogging the transportation infrastructure. In anticipation of hostilities, North Korean refugees began crossing the northern border into China, causing the Chinese government to begin closing the border and prevent refugees from entering the country. Public opinion regarding an alleged chemical weapons attack by the North Koreans was interestingly split between outrage at the North Koreans and frustration with the United Nations and the rest of the international community for failure to do anything sooner about the North Korean situation.

This fictional scenario could easily become reality in today's international climate. Most analysts would agree that a weapons of mass destruction (WMD) attack on American and allied facilities and personnel would have devastating consequences and would have repercussions that would be felt around the world. The North Korean unconventional weapons threat is a serious threat that poses dangerous risks to the United States and its allies in the Pacific region. As stated in the 2005 *National Defense Strategy of the United States of America*,

> Problem states will continue to undermine regional stability and threaten United States interests. These states are hostile to United States principles. They commonly squander their resources to benefit ruling elites, their armed

> forces, or extremist clients. They often disregard international law and violate international agreements. Problem states may seek WMD or other destabilizing military capabilities.[17]

This danger is reinforced in the National Strategy to Combat Weapons of Mass Destruction, "WMD - nuclear, biological, and chemical - in the possession of hostile states and terrorists represent one of the greatest security challenges facing the United States."[18] With regards to North Korea's WMD program, there are many intelligence gaps that prevent the United States from understanding North Korea's capabilities and intentions for its unconventional weapons. This makes military planning and counterproliferation efforts more challenging. This chapter will discuss what is known about North Korea's nuclear, biological, and chemical weapons program and uncover the answer to why this poses such a difficult challenge for the Intelligence Community.

B. NUCLEAR WEAPONS PROGRAM

The origins of the current crisis date back to December 2002. That month, North Korea announced that it planned to restart the nuclear facilities at Yongbyon (see Figure 1), effectively ending its participation in the 1994 United States-North Korea Agreed Framework. The Agreed Framework committed North Korea to dismantle its nuclear program in return for diplomatic and economic incentives for the isolationist country. The Agreed Framework was considered a success by many because North Korea's nuclear program was frozen for eight years from 1994 until the crisis began in December 2002.[19] However, when the agreement was finally signed, there was a lack of consensus within the Intelligence Community on how many weapons North Korea actually was capable of producing. At that time, intelligence agencies believed that North Korea had

[17] The National Defense Strategy (NDS) of the United States of America, Office of the Secretary of Defense (OSD), Washington DC. March 2005, 4, http://www.defenselink.mil/news/Mar2005/d20050318nds1.pdf (accessed August 2005). Hereafter referred to as National Defense Strategy 2005.

[18] *The National Strategy to Combat Weapons of Mass Destruction*, December 2002, 1. Available at www.whitehouse.gov/news/releases/2002/12/WMDStrategy.pdf (accessed August 2005).

[19] Randall E. Newham, "Nukes for Sale Cheap? Purchasing Peace with North Korea," *International Studies Perspectives* 5, no. 2 (May 2004), 170.

Figure 1. Yongbyon Nuclear Facility, North Korea[20]

separated enough plutonium for anywhere from one to five nuclear weapons.[21] By the time the crisis had begun, intelligence reports stated North Korea had covertly attempted to acquire an uranium enrichment program (see Figure 2), and had been trying to do so for over two years, clearly in violation of the Agreed Framework.[22] North Korea has publicly refuted those claims. In January 2003, North Korea informed the IAEA and the U.N. Security Council that Pyongyang was withdrawing from the Non-Proliferation Treaty. There was still much debate within the intelligence community on what type of

20 "North Korea Nuclear, Biological and Chemical Program Overview: History and Status," *Nuclear Threat Initiative Online*, http://www.nti.org/db/profiles/dprk/nuc/nuc_overview.html#maps (accessed August 2005). Hereafter referred to as *Nuclear Threat Initiative.*

21 Sharon A. Squassoni, "North Korea's Nuclear Weapons: How Soon an Arsenal?" Congressional Research Service, The Library of Congress, 1 August 2005, 2.

22 Joseph Cirincione, et al, *Deadly Arsenals: Nuclear, Biological and Chemical Threats, Revised Edition* (Washington, DC: Carnegie Endowment for International Peace, 2005), 282.

nuclear capability North Korea possessed. Three months later, North Korea publicly stated it possessed nuclear weapons, threatening the possibility of exporting nuclear materials.

Figure 2. Suspected North Korean Uranium Enrichment Sites[23]

An explosion in North Korea in September 2004 fueled speculation around the world for several days that the country had conducted some type of nuclear test. Although the blast at the site was not determined to be a nuclear explosion, the lack of clear and timely information regarding the incident brought to light the intelligence gaps that existed for North Korea's unconventional weapons program, especially the nuclear question. In October 2004, North Korea announced it had completed the reprocessing of the 8,000 spent fuel rods that were previously watched under IAEA safeguards,

[23] *Nuclear Threat Initiative*, August 2005. Map available at http://www.nti.org/db/profiles/dprk/nuc/nuc_ overview.html#maps (accessed August 2005).

potentially giving North Korea an additional 25-30 kilograms of plutonium, which is enough material to produce between four and six atomic bombs.[24]

After more than a year of rhetoric and failed negotiation attempts between the United States and North Korea, the rogue state announced in February 2005 that it had officially developed nuclear weapons. Speculation on North Korea's nuclear capability continued when Vice Admiral Jacoby, Director of the Defense Intelligence Agency, testified in front of the Senate Arms Services Committee in April 2005 that North Korea had the ability to arm its Taepo Dong-2 long range missile with a nuclear warhead. Intelligence estimates state that the Taepo Dong-2 missile could possibly have the range to reach the continental United States. Although there is considerable support within the Intelligence Community for the theory that North Korea has successfully miniaturized a nuclear warhead for a missile, the consensus view remains that North Korea is years away from having the capability to put a nuclear warhead on a missile.[25] The differing assessments within the Intelligence Community on the North Korean problem set proves that there are still numerous intelligence gaps that need to be filled in order to get a better a overall picture of the threat.

Much has been made of the reasons behind North Korea's nuclear strategy. It is difficult to discern the true nature of their nuclear intentions, mostly because there is little known of their actual nuclear capabilities. This is a significant intelligence gap that must eventually be solved. One theory is that the intent of North Korea's nuclear strategy is to increase pressure on the United States to strike a non-aggression pact or some type of new nuclear agreement that would provide new economic benefits to North Korea. Although it is unlikely that North Korea would launch a surprise nuclear attack on the United States or its allies, it would not be surprising if North Korea tried to use their

[24] Larry A. Niksch, "North Korea's Nuclear Weapons Program," *Congressional Research Service*, The Library of Congress, 3, June 2005, 10.

[25] Bradley Graham and Glenn Kessler, "N. Korean Nuclear Advance Is Cited," *Washington Post Online News Service*, 29 April 2005, http://www.washingtonpost.com/wp-dyn/content/article/2005/04/28/AR2005042802113.html (accessed August 2005).

nuclear program as leverage to extract economic or material concessions from the United States. This appears to be the strategy used by North Korea at the latest six-party negotiation talks.

Another theory is that North Korea is engaging in a much more aggressive and calculated strategy to achieve its goals. This new strategy has three objectives:

> (1) abolish the Bush Administration's proposal of June 23, 2004 (which called for a quick dismantlement of North Korea's plutonium and uranium enrichments programs after a three month preparatory period), as a basis for negotiations on the nuclear issue,
>
> (2) establish a long-term diplomatic stalemate on the nuclear issue that will last at least through the second Bush Administration, and
>
> (3) condition other governments to accept North Korea as a nuclear weapons state.[26]

On the other side of the negotiation table, the Bush administration's current policy towards North Korea includes the following aspects:

> (1) termination of the 1994 Agreed Framework,
>
> (2) no negotiating with North Korea until it dismantles its nuclear program, demanding that they take steps to ensure the complete, verifiable, irreversible dismantlement of its nuclear programs, both the plutonium program and the secret uranium enrichment program,
>
> (3) assembling an international coalition to apply economic pressure on North Korea,
>
> (4) planning for future economic sanctions military interdiction of North Korea shipping and air traffic through a Proliferation Security Initiative.[27]

[26] Niksch, 2.

[27] Ibid., 1.

The Bush administration has also previously stated that all options to resolve the situation remain on the planning table, to include military options. However, it is only recently that the United States has placed a priority on resolving the North Korean nuclear crisis, and a quick glance at the two divergent strategies shows that the two sides are far from reaching any type of meaningful resolution to the crisis.

North Korea is well aware that it does not have the military firepower to defeat the United States in a confrontation. From the North Korean vantage point, nuclear weapons can be an effective deterrent to the overwhelming superiority of the United States. If other nations were to ultimately accept North Korea as a nuclear power, Pyongyang would gain legitimacy in the international community, causing rifts between the United States and its allies, much like the rifts that developed between the United States and Europe in the months leading up to Operation IRAQI FREEDOM (OIF). As more time passes without a resolution to the nuclear crisis, North Korea can and will use that time to develop its nuclear weapons and associated facilities, as well as drive a wedge between the United States and its coalition partners.

C. CHEMICAL AND BIOLOGICAL WEAPONS PROGRAM

While there are numerous questions about the nuclear program, the North Koreans have a formidable chemical and biological weapons program from what is known thus far through open sources and defector reports (see Figure 3). Pyongyang's chemical and biological weapons also pose as an effective deterrent to offset the military advantage of the United States. With a focus on V-series agents, sarin, and mustard, North Korea can produce 4,500 tons of chemical agents in peacetime, 12,000 tons in wartime, and have a stockpile of anywhere from 2,500 to 5,000 tons of chemical agents.[28] As outlined in the fictional scenario above, a North Korean chemical attack on friendly forces in the operating area would have significant consequences for the North Koreans and for the numerous military and civilian victims of an attack. It is assessed that North Korea would use chemical weapons in a military confrontation against the United States and its allies to disrupt operations and cause chaos amongst the civilian

[28] Joseph S. Bermudez Jr., "The Democratic People's Republic of Korea and Unconventional Weapons," in *Planning the Unthinkable*, ed. Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, (New York: Cornell University Press, 2000), 191.

populace. The three most likely scenarios in which North Korea would use chemical weapons are 1) a United States-led military operation against North Korea, 2) an attempt by the North Koreans to reunify the peninsula (in which it would execute an intense attack posture to quickly take the peninsula before friendly forces could respond and retaliate), and 3) a last resort effort if the Kim Chong-il regime was on the verge of collapse.[29]

Probably more dangerous than North Korea's chemical weapons is its biological weapons arsenal. A recently released report from the State Department assesses that North Korea possesses a "dedicated, national-level effort to achieve a biological weapon capability and has developed and produced, and may have weaponized, biological weapon agents in violation of the [Biological and Toxin Weapons] Convention."[30] Its arsenal includes smallpox, anthrax, botulism, cholera, plague, yellow fever, hemorrhagic fever, and typhoid. However, North Korea may be focusing more on a defensive biological capability as opposed to an offensive one. Pyongyang has not focused on offensive biological warfare because of its limited biotechnology capabilities, and because of its limited biomedical capabilities, which could prove problematic for the protection of its own soldiers in the event of an offensive biological attack.[31] North Korea could use biological weapons in similar fashion to chemical weapons, using them as a last resort in the face of defeat, or prior to hostilities to cause chaos within the military and civilian populace in South Korea and Japan. Despite the available information, the fact remains that there still are significant intelligence gaps that exist on the North Korean biological and chemical weapons program, gaps that must be filled in order for the United States to prepare for this threat.

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[29] Joseph S. Bermudez Jr., "The Democratic People's Republic of Korea and Unconventional Weapons," in *Planning the Unthinkable*, ed. Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, (New York: Cornell University Press, 2000), 196.

[30] U.S. State Department, *Adherence to and Compliance With Arms Control, Nonproliferation, and Disarmament Agreements and Commitments, Bureau of Verification and Compliance*, Washington, DC, 30 August 2005, 27. A copy of this report can be found at http://www.state.gov/t/vc/rls/rpt/51977.htm (accessed September 2005).

[31] Bermudez, 191.

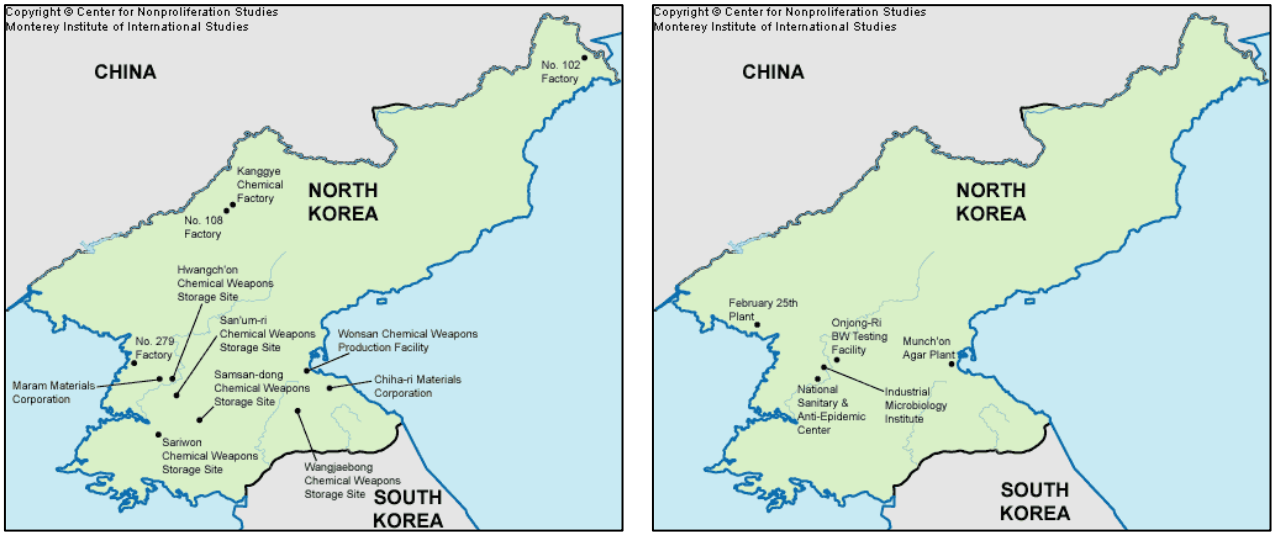

Figure 3. North Korean Chemical and Biological Facilities[32]

The North Koreans also have the means to deliver all the elements of the WMD program throughout the Pacific region and possibly beyond, threatening United States and allied interests. Pyongyang could choose to deliver its unconventional weapons arsenal via a variety of modes, such as aircraft, cruise missiles, unmanned aerial vehicles, artillery, ballistic missiles, or via its special operations forces. In anticipation of possible WMD activity in the event of hostilities, the North Korean regime has been preparing its citizens for such a contingency, distributing gas masks to the entire country back in 1992. From what is known thus far, the North Koreans appear to have a dangerous WMD arsenal at its disposal and are prepared to use it in the event of a confrontation with the United States.

D. INTELLIGENCE CHALLENGES

Despite all of this information, significant intelligence gaps remain regarding the North Korean unconventional weapons program. Much of the information that we possess on North Korea's capabilities is ambiguous at best. As explained earlier, this program constitutes a threat to American military forces and civilian personnel on the Korean peninsula. So why does the unconventional weapons program of North Korea

[32] *Nuclear Threat Initiative*, August 2005. Map available at http://www.nti.org/db/profiles/dprk/nuc/nuc_ overview.html#maps (accessed August 2005).

pose such a challenge to the Intelligence Community? One of the main reasons is that North Korea is an insular, closed society, making it difficult to gain timely and accurate intelligence data. The North Koreans are governed by an ideology of *"chuch'e"* or self-reliance. This self-reliance entails the rejection of dependence on other countries and the espousing of one's own strengths. The *"chuch'e"* ideology relates directly to North Korea's governmental goals of an independent foreign policy, a self-sufficient economy, and a self-reliant defense posture.[33] Although North Korea has received considerable amounts of aid, food, and weaponry from members of the international community including the United States, it remains steadfast in its self-reliance doctrine.

If the country remains isolationist, there will certainly be intelligence limitations that prevent the Intelligence Community from fully understanding the North Korean threat. Because of its insular nature, its tight control of the media, and its travel restrictions on its citizens, there is only so much open source intelligence (OSINT) that exists on North Korea. Intelligence analysts must be careful when evaluating North Korean OSINT, because much of it can be labeled as propaganda from the Kim Chong-il regime, while some open source information from North Korea is disseminated to the international community with the intent on deceiving its true motives.

The more technical forms of intelligence also have difficult challenges when dealing with North Korea's WMD program. North Korea has developed thousands of hard and deeply buried targets (HDBT) over the years to prepare for military operations against South Korea and the United States. The worldwide proliferation of these HDBTs is particularly troublesome in places like North Korea, where the country is pursuing unconventional weapons and protecting the associated delivery systems through a variety of hardening and deeply burying techniques.[34] North Korea's HDBTs have been designed to protect critical nodes that are of importance to Kim Chong-il's regime, such

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[33] "North Korea's Political Ideology: The Role of Chuch'e," *Library of Congress Online Research Tool*, June 1993, http://lcweb2.loc.gov/cgibin/query/r?frd/cstdy:@field (DOCID+kp0108) (accessed August 2005).

[34] Michael J. Morgan, "The Bunker-Busting Nuke: Essential Capability or Destabilizing Weapon?" National Defense University, National War College, 2002, http://www.ndu.edu/library/n2/n02MorganBunker.doc (accessed August 2005), 3.

as leadership command bunkers, command and control assets, and WMD facilities. The presence of HDBTs in North Korea poses an extremely difficult intelligence challenge. It is assessed that numerous tunnels in North Korea are over 300 feet deep, are wide enough to allow the passage of heavy equipment, and can support the movement of approximately 8,000 troops per hour during combat operations against South Korea.[35] IMINT and measurement and signatures intelligence (MASINT) both have significant limitations in trying to locate, fix, and target these HDBTs, since it is difficult to know where the targets are located because of concealment efforts. As a result, it becomes problematic to hold these targets at risk with precision weapons. Additionally, even if North Korean HDBTs were located, weapon effectiveness would be limited because of how deep the targets are. It would be extremely difficult to determine weapon effectiveness or battle damage assessment with imagery and MASINT, because deeply buried targets could still be operational even if entranceways or exits have been attacked with weapons. If timely IMINT and MASINT is not gathered on North Korean HDBTs prior to hostilities, coalition forces run the risk of being unable to determine where critical nodes are located in order for them to be targeted. IMINT and MASINT also have the additional challenge of trying to locate and target the various mobile missile systems that will be hidden in bunkers and then deployed to deliver unconventional weapons.

The art of SIGINT against a target like North Korea also has its difficulties. North Korea is known for keeping tight control over its communication outlets, which would be susceptible to intercept by the United States signals intelligence apparatus. Kim Chong-il's regime maintains a strict control over all broadcast and other communications systems in North Korea, monitoring all outgoing and incoming foreign transmissions, including overseas telephone calls.[36] This makes it difficult to collect intelligence on North Korea's activities to uncover its capabilities and intentions. It is

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[35] Joseph S. Bermudez, Jr., *North Korean Special Forces* (Annapolis MD: Naval Institute Press, 1998), 251, in Michael J. Morgan, "The Bunker-Busting Nuke: Essential Capability or Destabilizing Weapon?" National Defense University, National War College, 2002, 3. A copy of this article can be found at http://www.ndu.edu/library/n2/n02MorganBunker.doc (accessed August 2005).

[36] Desmond Ball, "Signals Intelligence in North Korea," *Jane's Intelligence Review* 8, Issue 1 (January 1996), 1.

assessed that North Korea also places great importance on protecting its signal emissions while trying to prevent its adversaries from using their signals intelligence network. The strategy to deceive signals intelligence collection consists of control of electronic emissions by total or partial radio silence, maximum reduction of emissions by use of directional antennas and low-power outputs, and electronic deception accomplished by transmitting false traffic to deceive the enemy.[37] So if the enemy restricts the majority of its communications and signals emissions, friendly forces are going to have extreme difficulty in collecting information and quality intelligence against the adversary.

Human intelligence also has severe limitations in combating the North Korean unconventional weapons threat. Again, because of its insular nature, gathering useful information through human intelligence sources is difficult. It is not easy to place spies, agents, or even foreign travelers into an isolated country like North Korea, nor is it easy to train a person to blend into a closed society. In addition to North Korea being an insular nation, there are two other main reasons for the lack of human intelligence on Kim Chong-il's regime. One reason is that the United States does not have diplomatic relations with North Korea, thus there is no embassy or consulate in the country. The lack of diplomatic presence prevents the United States from having access to information that can be gleaned from personnel stationed at an embassy, like in other places around the world with an American diplomatic mission. A second reason is that the Intelligence Community has been relatively unsuccessful in befriending North Koreans living in Japan and who belong to nationalist groups such as the Chosen Soren.[38] Intelligence gained from those sources would provide excellent insight into the North Korean society, but the small number of North Korean who can travel abroad are considered loyal to the North Korean regime and may be unreliable as intelligence sources.

The difficulties with human intelligence on North Korea lead into a related issue, adding to the question of why the North Korean WMD problem set is so challenging. There are inherent problems with the sharing of intelligence information between the

[37] Desmond Ball, "Signals Intelligence in North Korea," *Jane's Intelligence Review* 8, Issue 1 (January 1996), 10.

[38] Jeremy Kirk, "Intel Experts: N. Korea a 'Hard Target,'" Global Security Online Service, 21 March 2004, http://www.globalsecurity.org/org/news/2004/040321-dprk-target.htm (accessed August 2005).

United States and its allies in the Pacific area of operations. The United States has often had difficulty gaining information on North Korea because of strained intelligence agency relations with the South Koreans. South Korea is known for its strength in human intelligence that is acquired from defectors, intelligence which is critical to gaining information on North Korea's WMD program.[39] However, the United States remains frustrated with South Korea for failing to provide access to defectors in a timely manner. Intelligence analysts say fast and full access to defectors is crucial to uncovering the extent of North Korea's nuclear program and the rest of its unconventional weapons program.

Relations between the United States and China have also become strained as a result of the North Korean problem set. The United States wants China to take a more definitive and assertive role in the six-party talks, stating that this issue will have lasting effects on them most directly if not dealt with immediately. North Korea's strongest ally during the nuclear crisis, China has been criticized by the United States for not doing more to convince North Korea to agree to dismantle its nuclear program. It is unclear what China's goals are in the North Korean issue, but possible objectives are: 1) the management of bilateral relations with North Korea, as long as North Korean policy allows for an active Chinese role, 2) ensuring a credible and growing relationship with South Korea for developmental and security reasons, 3) collaboration and competition in relation to United States regional policies, and 4) encouraging a more limited role for other major powers such as Russia and Japan.[40] A destabilized North Korea would have serious implications for China's role in the region. A critical influx of refugees across the border could pose serious economic problems for China if the North Korean government were to collapse. Additionally, a destabilized North Korea could create uncertainty over control of North Korea's unconventional weapons, which could be covertly transported

[39] Donald Kirk, "Rift seen in S. Korean and US intelligence sharing," *Christian Science Monitor Online*, 11 March 2004. Article can be found at http://www2.gol.com/users/coynerhm/rift_seen_in_skkorean_and_us_intel.htm (accessed August 2005).

[40] Jonathan D. Pollack, "China and a Changing North Korea: Issues, Uncertainties, and Implications?" *North Korea's Engagement—Perspectives, Outlook, and Implications Conference Report*, National Intelligence Council, 23 February 2001, http://www.fas.org/irp/nic/nk_conference.html (accessed August 2005).

through China or to non-state elements that could use the weapons against China or other nations in the Pacific region.[41] Despite the importance of this issue that resides in China's backyard, Beijing has not shown much urgency in solving the North Korean problem. As a result, the United States is reluctant to share critical intelligence with a pseudo-ally who may or may not share the same long term goals in solving this issue. Nor is the United States receiving any intelligence of value from China because of its refusal to compromise its relationship with North Korea.

Interestingly, China has also been developing stronger ties to South Korea, which does not bode well for the relationship between South Korean and the United States. As South Korea has been steadily moving closer to China in the last few years due to economic and political reasons, relations with the United States have taken a turn for the worse. This move towards China presents a new challenge in the South Korean alliance. If the Chinese/South Korean relationship continues to grow, the United States will be even more reluctant to share intelligence on the North Korean problem with South Korea, for fear that Seoul will immediately pass that information on to the Chinese. North Korea will also not welcome the fact that its staunchest ally is growing closer to its adversary across the DMZ, further throwing the peninsula into a state of convoluted relationships, and sending North Korea further into isolation and shutting off avenues for understanding Pyongyang's WMD capabilities and intentions.

Japan also has a stake in the resolution of the North Korean situation, as it remains concerned about the intentions of North Korea towards its country. Relations between North Korea, South Korea, China, and the United States have left Japan somewhat out on the periphery, even though the North Korean situation directly affects its national security. Japan remains wary of North Korea after witnessing a launch of a North Korean Taepo Dong-1 missile over Japanese territory in August 1998. But Japan believes that United States wrongly places emphasis on efforts to curtail North Korea's long-range missile development, instead of addressing Japan's more pressing concern

[41]Andrew F. Diamond and Daniel A. Pinkston, "Don't Outsource North Korea Problem to China," *The Korea Times Online News Service*, 24 April 2005, http://cns.miis.edu/pubs/other/pinkston_050425.htm (accessed August 2005).

with the immediate threat of North Korea's forward deployed medium range ballistic missiles.[42] North Korea could also find it necessary to attack Japan prior to hostilities with unconventional weapons to keep them from mobilizing against its forces. Japan has also been asked to support the North Korean problem set economically and diplomatically, but has not received the same recognition that other countries have. All of these factors lead to reluctance on the part of the Japanese to help the United States solve this problem by sharing intelligence on North Korea, which further widens the intelligence gaps on North Korea's WMD program.

E. CONCLUSION

It is clear that the United States does not have the intelligence apparatus in place at this time to fully understand North Korea's unconventional weapons threat. Although there seems to be a fair amount of information available on Pyongyang's WMD program, much of what we know comes from a varying amount of sources, many of which cannot be validated. Too many intelligence gaps remain to be filled, despite the help of regional allies and despite the technological superiority of the United States. The WMD threat from North Korea is of the utmost concern to the United States, and presents a difficult challenge. The 2005 National Defense Strategy alludes to the North Korean WMD threat when it states, "Particularly troublesome [to the United States] is the nexus of transnational terrorists, proliferation, and problem states that possess or seek WMD, increasing the risk of WMD attack against the United States. Proliferation of WMD technology and expertise makes contending with catastrophic challenges an urgent priority."[43]

The Intelligence Community is not sufficiently structured to provide the type of all-inclusive and detailed intelligence information and analysis necessary for the United States to deter threats such as North Korea's unconventional weapons program, its nuclear capabilities, and its proliferation efforts. The next chapter will discuss what reform efforts are occurring in the Intelligence Community to enhance its capabilities in

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[42] "Engagement: Causes, Status, Outlook," North Korea's Engagement—Perspectives, Outlook, and Implications Conference Report, National Intelligence Council, 23 February 2001, http://www.fas.org/irp/nic/nk_ conference.html (accessed August 2005).

[43] National Defense Strategy 2005, 3.

today's dynamic threat environment. In 1998, the South Korean Foreign Ministry estimated two tons of poison gas used against unprotected civilians could kill over 100,000 people and seriously injure another 60,000.[44] If the situation remains unchanged, the United States, and in effect, the international community, will suffer the same problem in North Korea that was witnessed in Iraq with the faulty assessment of the existence of WMD. Only this time, the political stakes will be much higher, as will the risks to hundreds of thousands of coalition military and Korean civilians on the peninsula.

[44] "North Korean Chemical and Biological Weapons Threats Elaborated," *CBW Chronicle*, Vol. III, Issue 1 (February 2000), http://www.stimson.org/cbw/?sn=cb20020113258 (accessed August 2005).

III. INTELLIGENCE REFORM INITIATIVES

> Under this new law, our vast intelligence enterprise will become more unified, coordinated and effective. It will enable us to better do our duty, which is to protect the American people.[45]
>
> President George W. Bush, 17 December 2004, signing the Intelligence Reform and Terrorism Prevention Act

A. INTRODUCTION

Since the 9/11 terrorist attacks, there have been numerous calls from the White House, Congress, and various independent commissions to fundamentally restructure how the Intelligence Community operates. Many senior governmental leaders are appropriately concerned that the Intelligence Community is not configured to protect the United States from threats posed from terrorist elements and rogue nation-states. Needed Intelligence Community transformation should greatly improve the country's ability to fully understand enemy intentions and capabilities so that U.S. decisionmakers and military warfighters can protect its citizens, and gain the strategic, operational, and tactical advantage over the adversaries. Up until recently, the Intelligence Community has been operating in a Cold War mentality that has hampered its ability to go after the complex enemies in the international arena who have unconventional weapons, who move uncontested from country to country, and who are adept at fighting battles in an asymmetric manner. Most agree that the Intelligence Community needs to become more aggressive and agile to understand the enemy, but what exactly is the Intelligence Community doing to enhance its effectiveness against the 21st century adversaries?

There have been a number of initiatives proposed to transform the Intelligence Community, some of which have been outlined in the 2002 National Security Strategy of the United States, the Department of Defense Transformation Goals, the 9/11 Commission Report, the Intelligence Reform and Terrorism Prevention Act of 2004, and

[45] "President Signs Intelligence Reform and Terrorism Prevention Act," Office of the White House Press Secretary Press Release, 17 December 2004. Transcript available at http://www.whitehouse.gov/news/releases/ 2004/12/20041217-1.html (accessed August 2005).

the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction (referred to hereafter as WMD Commission). The goal of these proposals and reform initiatives is to make the Intelligence Community and its fifteen intelligence agencies a more efficient and successful entity at the strategic, operational, and tactical levels. This chapter will discuss in detail the some of the intelligence reform initiatives currently ongoing in the Intelligence Community and the following chapter will assess whether these initiatives will truly make the Intelligence Community more capable of understanding the scope, location, and components of the North Korean WMD threat. Chapter III also takes an in depth look at the National Security Agency, examines how its extensive transformation efforts have postured the agency to be successful against today's adversaries, and also shows how it is an excellent example for the rest of the Intelligence Community in this tumultuous time of change and reform.

Recently, the concept of intelligence reform has been a hot political topic, developing into a significant issue in the 2004 presidential election. However, intelligence reform is hardly a new concept, despite it being a popular topic recently in the media and around the Washington, DC beltway. Long before the 9/11 attacks, attempts had been made to reform and improve the operation of the Intelligence Community. Since 1948, there have been at least fourteen official studies and commissions that tried to make improvements in the Intelligence Community. The most recent agent of intelligence reform, the WMD Commission, gave its report to the president in March 2005 on the failures of the Intelligence Community in uncovering Iraq's WMD program. They levied harsh criticism upon the Intelligence Community, calling the pre-war intelligence on Iraq's unconventional weapons program "dead wrong." The commission ultimately offered seventy-four recommendations on how the Intelligence Community can be improved. According to the commission's report, the Iraq WMD failure was due to a number of critical factors:

> This failure was in large part the result of analytical shortcomings; intelligence analysts were too wedded to their assumptions about Saddam's intentions. But it was also a failure on the part of those who collect intelligence – the Central Intelligence Agency's (CIA) and the Defense Intelligence Agency's spies, the National Security Agency's (NSA) eavesdroppers, and the National Geospatial-Intelligence Agency's

> (NGA) imagery experts. In the end, those agencies collected precious little intelligence for the analysts to analyze, and much of what they did collect was either worthless or misleading. Finally, it was a failure to communicate effectively with policymakers; the Intelligence Community didn't adequately explain just how little good intelligence it had—or how much its assessments were driven by assumptions and inferences rather than concrete evidence.[46]

The critical question now is how the Intelligence Community can avoid repeating the gross mistakes that were made with the Iraq WMD program. As a result of the 9/11 Commission, the Intelligence Reform and Terrorism Prevention Act, and the WMD Commission, there are numerous reform initiatives taking place within the Intelligence Community today. These initiatives should organize the Intelligence Community in such a way to prevent another Iraq WMD failure. Due to the abundance of ongoing reform initiatives, this chapter will focus on the most important intelligence transformation initiatives that are currently being developed. These include the creation of the position of National Intelligence Director, horizontal integration, persistent surveillance, Intelligence Campaign Planning, newly created all-source intelligence centers, and specific reforms at the CIA, NGA, and NSA which will be elaborated upon later in the chapter.

The 9/11 Commission delivered its recommendations on how to restructure and streamline the Intelligence Community to be more effective. It reported that there was a severe lack of information sharing of terrorism-related intelligence, and that there was a lack of unity of effort within the Intelligence Community. Some have called the 9/11 Commission the most influential attempt to enact intelligence reform because of its overarching changes to the National Security Act of 1947.[47] The commission offered five recommendations in regards to the Intelligence Community:

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[46] The Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, *Report to the President of the United States*, Washington, DC, 31 March 2005, 3. A copy of the report can be found at http://www.wmd.gov/report/index.html (accessed August 2005). Hereafter referred to as WMD Commission Report.

[47] Michael Warner and J. Kenneth McDonald, "U.S. Intelligence Community Reform Studies Since 1947," *Center for the Study of Intelligence*, Strategic Management Issues Office Washington, DC, April 2005, iv. Article available at http://www.cia.gov/csi/monograph/US%20Intelligence%20Reform%20Studies/73531book.pdf (accessed August 2005).

1) unifying strategic intelligence and operational planning against Islamist terrorists across the foreign-domestic divide with a National Counterterrorism Center;

2) unifying the intelligence community with a new National Intelligence Director;

3) unifying the many participants in the counterterrorism effort and their knowledge in a network-based information sharing system that transcends traditional governmental boundaries;

4) unifying and strengthening congressional oversight to improve quality and accountability; and

5) strengthening the FBI and homeland defenders.[48]

President Bush accepted many of the recommendations of the 9/11 Commission when he signed the Intelligence Reform and Terrorism Prevention Act into law in December 2004. This discussion will focus primarily on the first three recommendations from the 9/11 Commission.

B. INTELLIGENCE REFORM INITIATIVES

1. Establishment of the DNI

One of the most controversial recommendations that came from the 9/11 Commission was the appointing of a Cabinet-level National Intelligence Director who would consolidate and coordinate the efforts of the fifteen intelligence agencies and control their intelligence budgets. The Act officially created the position of Director of National Intelligence, and President Bush selected John Negroponte, former United States Ambassador to Iraq, to serve as the first DNI. Before the legislation was enacted, the Director of Central Intelligence (DCI) was multi-hatted as the overseer of the fifteen intelligence agencies, the head of the CIA, and the principal intelligence advisor to the president. Despite this enormous responsibility, DoD controlled approximately 80 percent of the intelligence budget. The new DNI does not have the additional job of CIA

[48] The 9/11 Commission. *Final Report of the National Commission on Terrorist Attacks Upon the United States, Executive Summary*, Washington, DC, July 2004, 20-21. The commission report can be found at http://www.9-11commission.gov/report/911Report.pdf (accessed August 2005). Hereafter referred to as 9/11 Commission Report.

Director, which allows him to focus on the Intelligence Community as a whole and not be torn between the CIA and the rest of the community. The new legislation gives the DNI budgetary power and authority over the Intelligence Community. A DNI with budgetary power and authority over all the intelligence agencies will have a good chance of increasing cooperation and communication between the intelligence organizations. Three former CIA Directors, Admiral Stansfield Turner, William Webster, and James Woolsey, came out in strong support of the recommendation for a National Intelligence Director. All three also agreed that the most important issue for the DNI will be control of the intelligence budget. Webster further stated that "the designated leader must be clearly and unambiguously empowered to act…[and] control of the budget is essential to effective management of the intelligence community."[49]

There has already been some controversy between DoD and the Intelligence Community, as the DNI will have to work closely with the Pentagon in order to ensure goals for the community are not usurped by DoD. Secretary of Defense Rumsfeld has been vocal in his criticism of the DNI position because it may affect how DoD's intelligence agencies operate. Foreshadowing an impending rift between the DoD and the Intelligence Community on intelligence reform, he testified in front of the Senate Armed Services Committee in August 2004 and said that he reluctantly agreed with the idea for a DNI. He urged Congress to be wary of implementing changes in the Intelligence Community too quickly while trying to prosecute the war on terrorism. He stated that "I doubt that we should think of intelligence reform being completed in a single stroke…we need to remember that we are considering these important matters while we are waging a war - If we move unwisely and get it wrong, the penalty would be great."[50] The relationship between DoD and the DNI could prove to be contentious and must be watched closely. Secretary Rumsfeld recently ordered Undersecretary of Defense for Intelligence Stephen Cambone to take the lead on DoD intelligence reform

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[49] Brian Knowlton, "Ex-Chiefs of C.I.A. Back Key Point of 9/11 Report," *New York Times Online News Service*, 16 August 2004, http://www.nytimes.com/2004/08/16/politics/16CND-PANE.html?hp (accessed August 2005).

[50] Philip Shenon, "Rumsfeld Wary About Shuffling Spy Duties," *New York Times Online News Service*, 18 August 2004, http://www.nytimes.com/2004/08/18/politics/18panel.html?hp. (accessed August 2005).

efforts. These include plans focusing on resources, acquisition oversight, personnel management, security and the creation of any new national intelligence centers,[51] which some interpreted as an early challenge to the DNI's authority because some of these efforts fall within the DNI's new domain.

Cambone has been leading DoD's intelligence transformation efforts in concert with the Intelligence Community. DoD has highlighted six goals for intelligence transformation. Those goals are as follows:

1) know something of intelligence value about everything of interest to us, all the time;

2) develop reliable strategic warning;

3) pursue agile and adaptable intelligence collection and analysis capability;

4) provide an intelligence capability that supports a national strategy of forward deterrence and agility;

5) ensure military forces receive intelligence in a fashion and in a format that enables them to swiftly defeat an adversary;

6) Ensure knowledgeable adversaries do not compromise our secrets.[52]

In trying to attain these transformation goals, Cambone is placing high emphasis on three initiatives with the Intelligence Community, focusing horizontal integration, persistent surveillance, and intelligence campaign planning.

2. Horizontal Integration and Persistent Surveillance

Horizontal integration and persistent surveillance work in tandem with each other. Horizontal integration is the initiative to get the various agencies to share information with each other, and persistent surveillance is refining the ability to have continuous collection capability throughout all intelligence spectrums: air, ground, and space.

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[51] Walter Pincus, "Rumsfeld Memo on Intelligence Criticized." *Washington Post Online News Service*, 8 April 2005, http://www.washingtonpost.com/wp-dyn/articles/A35490-2005Apr7.html?nav=hcmodule (accessed August 2005).

[52] Stephen A. Cambone, *Testimony Before The Senate Armed Services Committee, Strategic Forces Subcommittee*, United States Congress, 7 April 2004, 4-5. Transcript available at http://www.fas.org/irp/congress/ 2004_hr /040704cambone.pdf (accessed August 2005).

Horizontal integration will pose a big challenge – getting analysts who have been trained for years not to collaborate or share information to buy into the concept. However, the benefits certainly outweigh the costs. According to intelligence planners, the horizontal integration concept will "combine national security community assets into processes and capabilities that acquire, synchronize, correlate and deliver data of all types in a consumer-centric environment… geared toward understanding an adversary's intentions and searching for links to capabilities and opportunities to thwart its efforts."[53] These two initiatives were detailed in April 2004 during a Senate Armed Services Strategic Subcommittee hearing by Cambone, who stated that the intelligence collected via persistent surveillance is "useless without having a basis for moving that information…and that's why DoD is working so hard on horizontal integration. [O]nce the information is moved, having an analytic cadre capable of analyzing that data and extracting knowledge from it is essential."[54]

3. Intelligence Campaign Planning

Another aspect of intelligence transformation ongoing within the Intelligence Community and DoD is the development of Intelligence Campaign Planning. This concept will ensure that battlefield commanders will have synergized intelligence at their disposal throughout the planning process. According to Cambone, Intelligence Campaign Planning will "bring together DoD and Intelligence Community capabilities in a more synergistic effort [and] focus on 'operationalizing intelligence,' transforming the functions and capabilities of Defense intelligence into more than simply a supporting arm of the Department, but rather into a true joint operational capability."[55] This initiative will go a long way in ensuring that the combatant commander or Joint Task Force

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[53] Beverly P. Mowery, "Horizontal Integration Aligns Strategies, Operating Concepts to Defeat New Threats," *Signal Connections* 1, issue 6, 15 March 2004. Article available at http://www.imakenews.com/signal/e_article 000236596.cfm?x=b11,0,w (accessed August 2005).

[54] Doug Sample, "Committee Hears DoD's Plans for Intelligence Transformation," *American Forces Press Service Online*, 9 April 2004. Available at http://www.defenselink.mil/news/Apr2004/n04092004_200404092.html (accessed July 2005).

[55] Stephen A. Cambone, *Testimony Before The Senate Armed Services Committee, Strategic Forces Subcommittee*, United States Congress, 7 April 2004, 13. Transcript available at http://www.fas.org/irp/congress/2004_hr /040704cambone.pdf (accessed August 2005).

commander will have all the available tailored intelligence to assist the decision-making process.

4. All-Source Intelligence Centers

The Intelligence Reform and Terrorism Prevention Act also created a National Counterterrorism Center (NCTC), responsible for integrating intelligence on terrorism and counterterrorism, and performing all-source analysis for planning purposes. The Director of the NCTC is tasked by the DNI with providing "strategic operational plans for the civilian and military counterterrorism efforts of the United States Government and for the effective integration of counterterrorism intelligence and operations across agency boundaries, both inside and outside the United States."[56] The NCTC will take over the mission previously done by the Terrorist Threat Integration Center, and this new organization will enable different intelligence agencies to work together by putting all the intelligence data in one place. It will provide the military and political leadership with a comprehensive assessment of terrorism threats around the world. This will make it easier to integrate critical terrorism intelligence, and quickly push that time-sensitive information into the military planning process. National-level intelligence has been a critical part of DoD's planning and operational capabilities since the first Gulf War, and has become thoroughly integrated into military operations.[57]

In addition to the NCTC, the Intelligence Reform and Terrorism Prevention Act also creates a National Counterproliferation Center (NCPC), responsible for developing all-source intelligence support for counterproliferation efforts and "coordinating counterproliferation plans and activities of the various departments and agencies of the United States Government to prevent and halt the proliferation of WMD, their delivery systems, and related materials and technologies."[58] The Act also allows the DNI to create national intelligence centers in order to consolidate all-source intelligence.

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[56] U.S. Congress, *House Report 108-796 - Intelligence Reform and Terrorism Prevention Act,* December 2004, 38. Available at http://www.gpoaccess.gov/serialset/creports/intel_reform.html (accessed July 2005). Hereafter referred to as *Intelligence Reform and Terrorism Prevention Act.*

[57] Richard A. Best Jr., "Intelligence Community Reorganization: Potential Effects on DOD Intelligence Agencies," *Congressional Research Service*: The Library of Congress, 6 December 2004, 4.

[58] *Intelligence Reform and Terrorism Prevention Act,* 40.

Consolidating intelligence analysis from different disciplines in one central location is a concept that is being developed for the first time. Many would argue that the Intelligence Community would have uncovered clues about the 9/11 attacks much earlier had an all-source collaborative intelligence organization had existed. This is an innovation which is critical to fully understanding challenging threats that exist in today's international climate. There are too many layers of bureaucracy and "stovepipes" occurring in the Intelligence Community, and not enough crosstalk or coordination between the various intelligence agencies exists, which often prevents the entire intelligence picture from getting to the right customer at the right time. New metrics will have to be created to effectively judge whether or not the new NCTC, NCPC, and National Intelligence Centers will be successful, but it is a step in the right direction.

Quality intelligence analysis is critical to the success of all of these new intelligence centers. Reforming analysis is another one of the new DNI's top priorities. Once the information is collected, it must be analyzed thoroughly in order to give policymakers and military commanders the best possible intelligence to make sound decisions that will protect lives and assets. Due to faulty analysis in the Iraq WMD, the United States suffered a serious loss of credibility in the eyes of the international community. To correct this problem, the DNI's office has created a new Strategic Analysis Unit to develop long-term research. In addition, according to General Michael V. Hayden, Principal Deputy Director of National Intelligence, the DNI is establishing centers of excellence that will facilitate alternative analysis, develop new procedures to review and evaluate the analytic tradecraft and reliability of finished intelligence products, and rebuild the expertise of intelligence analysis to ensure the integrity and credibility of intelligence products.[59] In order to succeed in these goals, different agencies will have to share information and collaborate much more than ever before. It will be the DNI's responsibility to oversee reform efforts at the various agencies, and ensure that they all move towards increased collaboration. The next section will discuss

[59] General Michael V. Hayden, *Testimony Before House Permanent Select Committee Subcommittee on Oversight*, 28 July 2005, 2. Transcript available at http://www.dni.gov/hayden_hpsci_072805.html (accessed August 2005). Hereafter referred to as *Hayden House Permanent Select Committee Subcommittee on Oversight Testimony*.

some of the specific reforms that are happening at the three of the intelligence agencies, CIA, NGA, and NSA.

C. INTELLIGENCE REFORM AT CIA, NGA, AND NSA

1. CIA/HUMINT Reform

The CIA is undergoing a significant transformation in light of recent events that have placed the agency in full view of Congress and the American public. These events have many questioning its ability to protect the United States and its citizens. The agency took the brunt of the stinging criticism for the Iraq WMD fiasco and is still reeling from it. Newly designated by the Intelligence Reform and Terrorism Prevention Act as National HUMINT manager, the CIA has seen a number of changes designed to increase the amount of human intelligence assets on the ground to infiltrate various adversary organizations. The Intelligence Community is undoubtedly addressing HUMINT as a significant concern. Army General (ret) Tommy Franks, former Commander of United States Central Command is one of the many voicing concern over the lack of human intelligence to provide accurate information. He is adamant that the United States "invested too much in electronic spy surveillance and not enough in spies…to get information, we have to marry the devil or at least employ him. You have to deal."[60] Much will be done to transform this area of intelligence. Both the 9/11 Commission and the Intelligence Reform and Terrorism Prevention Act noted the importance of HUMINT to America's safety. The Act stated that the "continued development and improvement of a robust and empowered and flexible HUMINT work force is critical to identifying, understanding, and countering the plans and intentions of the adversaries of the United States."[61] However, it goes much deeper than just "spies" as General Franks' comments suggest. There is much more to be done than just putting agents in a country and expect quality intelligence to appear.

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[60] "Retired General Pushes for More U.S. Spies," *CNN Online News Service*, 29 July 2004, http://www.cnn.com/ 2004/US/07/29/franks.interview/ (accessed August 2005).

[61] U.S. Congress, *House Report 108-796 - Intelligence Reform and Terrorism Prevention Act*, December 2004. A copy can be found online at http://www.gpoaccess.gov/serialset/creports/intel_reform.html (accessed August 2005).

Efforts are underway to begin more aggressive tactics to infiltrate terrorist organizations and hostile countries. Human intelligence transformation will also include clandestine logistics, overt debriefers, interrogators, and a streamlined process to better manage and oversee human intelligence resources.[62] In order to engage in more aggressive HUMINT tactics, there is a need for an increase in HUMINT-trained personnel. In response to that need, President Bush recently ordered the Central Intelligence Agency to increase the number of spies by fifty percent and to double the number of agents in the research and development department tracking weapons of mass destruction.[63] There has also been increased collaboration between the CIA and other organizations such as the Federal Bureau of Investigations and DoD to share intelligence and consolidate HUMINT efforts. As stated by General Hayden, "enabling our human intelligence collectors to obtain more information on the plans and intentions of our adversaries is among our top priorities."[64]

Additionally, the CIA is delving deeper into another intelligence discipline that has garnered little publicity. Little emphasis has been placed on the art of open source intelligence, or OSINT, which entails gaining information from openly accessible sources such as the Internet or foreign media broadcasts. According to Stephen Mercado, CIA analyst in the Directorate of Science and Technology, the vast amount of open source information available today will help change the way the Intelligence Community does business. He states "The explosion in OSINT is transforming the intelligence world with the emergence of open versions of the covert arts of HUMINT, IMINT, and SIGINT...open sources increasingly enhance secret collection programs. The CIA, NGA, NSA, and other actors on the classified side all benefit from the growing volume of open data serving them as collateral information."[65] The 9/11 Commission, the Intelligence

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[62] Cambone, 13.

[63] Jerome Bernard, "Bush Tells CIA To Get More Spies," *AFP Online News Service*, 27 November 2004. Retrieved from Lexis-Nexis Academic, http://web.lexis-nexis.com/universe (accessed August 2005).

[64] *Hayden House Permanent Select Committee Subcommittee on Oversight Testimony*, 3.

[65] Stephen C. Mercado, "Sailing the Sea of OSINT in the Information Age," *Studies in Intelligence*, Vol. 48, no. 3, 2004, 4. Article can be found online at http://www.cia.gov/csi/studies/vol48no3/article05.html (accessed August 2005).

Reform and Terrorism Prevention Act, and the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction all concurred that there needs to be some type of entity that deals with open source information. The Intelligence Community is taking seriously the boom in information from open sources and making changes accordingly. As part of an overall reform effort within the CIA, the agency is placing a higher priority on OSINT. CIA Director Porter Goss has been tasked by the DNI with creating an open source organization within CIA with a 100 million dollar budget that will expand upon the work of the Foreign Broadcast Intelligence Service, which translates foreign-language broadcasts.[66]

2. NGA Reform Initiatives

Responsible for coordinating the collection and processing of IMINT, the NGA (formerly the National Imagery and Mapping Agency) is also undergoing a significant transformation process and reform effort in order to meet the new intelligence challenges in the information age. This is because NGA also received significant criticism from the WMD Commission on its failure to correctly assess the true nature of Iraq's chemical warfare equipment. The WMD Commission stated, "NGA has noted that imagery, when used alone, may not definitely determine the intended purpose of an adversary's activity. The Community's over-reliance on ambiguous imagery indicators thus played a pivotal role in its ultimate misjudgment that Iraq had restarted chemical weapons (CW) production and had increased its CW stockpiles."[67] Therefore, NGA is working on a number of initiatives that are helping them provide timely geospatial intelligence needed to understand the enemy and avoid the failures of the past. One such initiative is a collaborative tool called Future Intelligence Requirements Environment (FIRE). All of the various commissions have criticized the Intelligence Community on its failure to collaborate and share information; the FIRE system may be the answer to that problem. Originally designed to look at longer-term intelligence problems, analysts at NGA believe that there may be an opportunity to use FIRE for more current applications. FIRE is a database that pulls information from different intelligence agencies, and it also has

66 Timothy J. Burger, "Opening Up the CIA," Time Magazine Online, 7 August 2005, http://www.time.com /time/magazine/article/0,9171,1090889,00.html (accessed August 2005).

67 WMD Commission Report, 124.

analytical tools available for analysts to run simulations and models. It has the ability to lay out possibilities and options based on accumulated data collected from sensors, and from known data about friendly and enemy platforms and systems entered by subject-matter experts across many different fields.[68]

NGA's mission has become much more difficult with the increase in adversary use of denial and deception and urban terrain, as well as the need to conduct rapid bomb damage assessments for time-sensitive targeting strikes. NGA has been very involved in the persistent surveillance and horizontal integration initiatives, and has developed a geospatial knowledge base (GKB) to support those reforms and negate the enemy's tactics. The GKB will contain information and let analysts monitor various intelligence problems, and the GKB can search for links, patterns, and anomalies within the collected information, and also cue analysts automatically and conduct tasking.[69] These types of programs will go a long way towards increasing the amount of collaboration, integration, and information sharing between the different intelligence agencies.

3. NSA Transformation

Throughout its 52 year history, NSA has had two primary missions – SIGINT and information assurance (IA) – the nation's codemakers and codebreakers. As America's cryptologic organization, NSA "coordinates, directs, and performs highly specialized activities to protect friendly information systems and produce foreign intelligence information."[70] Recently, NSA has received broad criticism over the last few years for internal agency problems that may be partially responsible for some of the intelligence "failures" that have occurred. These include the inability to detect the Indian nuclear test in 1998, the embassy bombings in Africa in 1988, and difficulties in tracking terrorists

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[68] Karen Walker, "A Bright Spark: FIRE Allows U.S. Intel Agencies to Learn from 'What Ifs,'" *Defense News*, 2 Aug 2004. Article can be found at http://www.nima.mil/NGASiteContent/StaticFiles /OCR/defense_news _080204.pdf (accessed August 2005).

[69] Jaan A. Loger and Thomas M. Carson, "OPEN FORUM: Persistent Surveillance at NGA," *GeoIntelligence* (September/October 2004). Article can be found at http://www.geointelmag.com/geointelligence/article/ articleDetail.jsp?id=122108 (accessed August 2005).

[70] "Introduction to NSA/CSS," National Security Agency Website, www.nsa.gov (accessed July2005).

such as Osama bin Laden.[71] As a result of this criticism, the SIGINT discipline has been undergoing a transformation over the last few years, putting reform at the forefront of its operations in order to meet the new dynamic challenges of the 21st century. A more extensive examination of the agency shows that it is a great example of transformation to make itself a more viable intelligence organization to go after difficult problem sets. The Intelligence Community's current blueprint for reform almost mirrors what NSA has done over the last few years. This section of the chapter will explain why NSA made the changes it did, and outline some of the innovations that NSA undertook to transform itself to meet the challenges of today's increasingly astute adversaries who are becoming more adept at using information warfare and asymmetrical warfare to their advantage.

During the Cold War, NSA had a relatively unlimited budget to monitor the Soviet Union threat, but the demise of the Soviet Union left the agency without a true enemy. As a result, personnel and budget levels decreased at NSA as well as at other defense agencies.[72] Congressional committees responsible for oversight over the agency were also extremely critical of NSA's operations. Congress reported that the agency ran the risk of beginning the new century without the technological infrastructure and human resources needed solely to maintain the status quo, or even meet emerging challenges.[73] NSA helped to win the Cold War, and thus saw no need to change or to innovate to stay ahead of the curve, which left the agency extremely vulnerable to failure and criticism.

Air Force General Michael V. Hayden served as the Director of the National Security Agency from March 1999 until April 2005, the longest serving Director in the 50 year history of the agency. He is the Department of Defense's senior uniformed intelligence officer and was recently appointed by President Bush to become the first Deputy Director for National Intelligence, receiving a fourth star in the process. General Hayden was tasked by the Secretary of Defense (SECDEF) and the Director of Central

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[71] Daniel Verton, "NSA Playing IT Catch-up," *Computer World Online*, 6 December 1999, http://www.fcw.com /fcw/articles/1999/FCW_120699_175.asp (accessed July 2005).

[72] George Cahlink, "Breaking the Code," *Government Executive Magazine Online*, 1 September 2001, http://www.govexec.com/features/0901/0901s6.htm (accessed August 2005).

[73] "Senate Report 106-279," 5.

Intelligence (DCI) to fix the agency's problems and bring the agency back to prominence. Without change, the agency would have been reduced to irrelevancy in the high-tech information age. One of the first things General Hayden received from DCI George Tenet, Secretary of Defense Rumsfeld, and the Congressional oversight committees was "top-cover." They allowed General Hayden the freedom to institute sweeping changes at the agency, fully knowing that there were some things that NSA would be unable to do in the short term because the agency would have to focus on transformation in order to build up the agency again. The "top-cover" and support from the DCI, SECDEF, and Congress allowed General Hayden the flexibility to take some risks at the agency and use some unconventional methods to make substantial and lasting changes.

Upon assumption of command, General Hayden commissioned two reviews teams to give him an unvarnished update on the state of the agency. One internal team was made up of NSA employees, and a second group was composed of independent outside experts, named the External Review Team. The External Team was the first of many attempts by General Hayden to go outside of the agency to get a critical unbiased look at his organization. The External Review Team produced a detailed scathing report on the agency with numerous recommendations for General Hayden to address immediately; NSA was an agency in crisis. The main thrust of the report was that NSA was buried deep in bureaucratic conflict, addled with poor leadership and that the agency had lost touch with its customers and stakeholders.[74] NSA had become too wedded to its standard operating procedures that had developed over time during the Cold War. Despite the successes of the agency in the past, extensive organizational problems existed that would need to be addressed in order to truly transform the agency.

Some of the specific issues outlined in the report stated that NSA suffered from poor financial management, a fractured personnel system, an insular culture, and a broken decision making process demonstrated by a lack of accountability and

[74] "External Team Report on Reorganization: A Management Review for the Director, NSA," 22 October 1999, http://www.nsa.gov/releases/relea00056.pdf (accessed August 2005), 18.

empowerment.[75] The bureaucratic impediments to change and innovation that were present at NSA were threatening to lead the agency towards obsolescence. The insular culture of the agency was deeply imbedded in the organization and had emerged over the agency's fifty year history because of its need for secrecy. An insular organization such as NSA suffered from groupthink, failing to offer criticism of other members in the organization and failing to share information with other similar organizations, which stifles innovation and creativity.[76] This is characteristic of the problems that afflict the entire Intelligence Community. Additionally, NSA ran the risk of falling behind the commercial world in technology, which was allowing adversaries to catch up and increase its capabilities.

After reviewing the external and internal reports, General Hayden started the era of transformation at NSA by initiating the "100 Days of Change." This was the beginning of his effort to reshape the culture throughout the agency. Hayden, in effect, was attempting to change NSA's measure of effectiveness (MOE) from status quo operations (NSA continuing as solely a "gatherer" of information) to NSA being successful in the GWOT and becoming more of an aggressive "hunter" for critical intelligence information. This would prove to be an extremely difficult task, since the agency was, by its nature, an insular, secretive agency that was resistant to change. General Hayden's challenge was to transform not only the mission of the agency but to change its ethos as well, a challenge that faces the entire Intelligence Community. Since the cultural dynamic was one of secrecy, General Hayden attempted to overcome that by putting a human face on the agency and showing the public that the mission was still being accomplished without their civil liberties being violated. To make things even more difficult, transformation had to occur in the midst of fighting not just one adversary as in the Cold War, but multiple enemies in the new security environment.

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[75] "External Team Report on Reorganization: A Management Review for the Director, NSA," 22 October 1999, http://www.nsa.gov/releases/relea00056.pdf (accessed August 2005), 19.

[76] Michael L. Tushman and Philip Anderson, *Managing Strategic Innovation and Change* (Oxford: Oxford University Press, 2004), 236.

The four main transformation goals established by NSA in 1999 under General Hayden's leadership are as follows:

1) Ensure responsive intelligence information and information assurance for national decisionmakers and military commanders.

2) Continuously modernize the cryptologic system by using advanced technology to provide solutions for the production and protection of information.

3) Shape the NSA workforce to meet SIGINT and Information Assurance mission challenges.

4) Maximize the use of resources through effective business processes and prudent risk to achieve and sustain responsive Signals Intelligence and Information Assurance solutions.[77]

Regarding the first transformation goal, NSA revamped many procedures to make sure that those who need critical intelligence are able to get that information in a timely manner. One of the first things General Hayden did to achieve this goal was to restructure his leadership team. This allowed his directorates to run the day-to-day operations and reduce bureaucratic impediments that were preventing the agency from running at maximum efficiency.[78] The new streamlined management structure ensures that the agency can quickly respond instead of going through layers of supervision and bureaucracy to get information to the right place at the right time. In order to create a new leadership team, NSA went from five large directorates to two primary directorates, one for SIGINT and one for IA. Several senior leaders from outside of the agency were brought in to give fresh perspectives and assist in bringing about real change, innovation, and cooperation at the agency. These new leaders ignored the long standing "we've always done it this way at NSA" culture, and gave General Hayden new ideas on how to

[77] William B. Black, *Statement for the Record Before the House Permanent Select Committee on Intelligence Building Capabilities: The Intelligence Community's National Security Requirement for Diversity of Languages, Skills, and Ethnic and Cultural Understanding*, 5 November 2003, 1. Available at http://www.nsa.gov/ releases/relea00067.htm (accessed August 2005). Hereafter referred to as *Black Testimony*.

[78] Richard Lardner, "NSA Overhauls Corporate Structure in Effort to Improve Operations." *Inside the Air Force Online*, 23 June 2000, http://cryptome.org/nsa-redo.htm (accessed August 2005).

help implement his vision. He encouraged over 100 Senior Executive Service (SES) members to take early or normal retirement, hired twenty-eight SES personnel from outside NSA,[79] and promoted many junior executives who had innovative ideas but were being marginalized by the old guard leaders. By bringing in new blood, NSA was able to spark creativity by hiring new leaders who rejected and ignored the organizational code.[80]

Due to the inherent technical nature of the SIGINT discipline, NSA depends heavily on technology to do its mission. NSA's second transformation goal focuses on NSA's reliance on technology, and was arguably the most problematic and difficult to achieve. The sheer volume of information now available to intelligence professionals for collection, analysis, and dissemination to military and policy decision-makers to keep the nation, its military forces, and its allies safe is the biggest challenge facing NSA. The agency was falling behind technologically, especially since adversaries appear to have the ability to access the same telecommunications network that we do. General Hayden said that "technologically we had to keep pace with an oligarchic, resource-poor, technologically inferior, over-bureaucratized, slow-moving nation-state...adversary communications are now based upon the developmental cycle of a global industry that is literally moving at the speed of light - cell phones, encryption, fiber optic communications, and digital communications."[81] To deal with this problem, NSA initiated Projects GROUNDBREAKER and TRAILBLAZER. GROUNDBREAKER is a multi-billion dollar information technology outsourcing program that will increase NSA's dependence on commercial, off-the-shelf hardware and software.[82] TRAILBLAZER is a DoD acquisition program that uses the U.S. commercial industry to obtain an architectured and integrated system to provide much-needed mission

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[79] George Cahlink, "Breaking the Code," *Government Executive Magazine Online*, 1 September 2001, http://www.govexec.com/features/0901/0901s6.htm (accessed August 2005).

[80] Tushman and Anderson, 270.

[81] David Martin, "National Security Meltdown," *CBS News/60 Minutes II Online*, 19 June 2002, http://www.cbsnews.com/stories/2001/01/24/60II/main266857.shtml (accessed August 2005).

[82] Joshua Dean, "Security Agency's CIO Outlines Transformation Plans." *Government Executive Magazine Online*, 27 March 2002, http://www.govexec.com/dailyfed/0302/ 032702j1.htm (accessed August 2005).

capabilities in telecommunications.[83] Both programs have been instrumental in addressing NSA's technology issues, helping them to keep pace with a rapidly changing technological world. Extremely controversial at their inception, GROUNDBREAKER and TRAILBLAZER were also created to be independent organizations within NSA answering only to General Hayden, and he gave them the freedom to explore new ways of doing business without interference from within the agency.

NSA was severely criticized for not transforming much earlier in order to keep pace with today's technology. The agency that earned its living by tapping into copper cables and intercepting broadcast transmissions in the Cold War era was having difficulty dealing with fiber-optic cables and modern encryption.[84] Then, NSA suffered a potentially devastating setback in January 2000, when its computers crashed due to a software anomaly. The agency was unable to forward intelligence data, process that data and communicate internally for 72 hours. Normal operations finally resumed but at the cost of thousands of man-hours and one and a half million dollars.[85] This only highlighted the severity of the aging technology at the agency, which the transformation initiatives were working to remedy. Technology-based organizations such as NSA have little choice but to challenge current existing paradigms because the rapidly changing environment in which they function makes it vital to shake up the status quo,[86] because disastrous results could occur if they stand still. Again, this is the same challenge that faces the entire Intelligence Community.

The third goal, shaping the NSA workforce, has also been difficult for the agency because of the emphasis on DoD personnel downsizing since the end of the Cold War. As a result of the downsizing and the lack of new hires over the last decade, NSA found

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[83] Harrison Donnelly, "Information Age Warrior - Interview with Lieutenant General Michael V. Hayden," *Military Information Technology Online*, 9 February 2004, 2. Article can be found at http://www.military-information-technology.com/article.cfm?DocID=383 (accessed September 2005).

[84] Dan Verton, "NSA Playing IT Catch-up," *Computer World Online*, 6 December 1999, http://www.fcw.com /fcw/articles/1999/FCW_120699_175.asp (accessed August 2005).

[85] General Michael V. Hayden, Address to Kennedy Political Union of American University, Washington, DC, 17 February 2000. Transcript available at http://www.nsa.gov/releases/relea00057.html (accessed August 2005).

[86] Tushman and Anderson, 303.

itself with an aging workforce that had minimal experience with current technology. Now, NSA is hiring to infuse the agency with new blood. More than twenty-two percent of the agency's current civilian work force has been hired since 2000,[87] and NSA hopes to continue the increase civilian billets between FY2005 and FY2008 to enhance the existing workforce with the multidisciplinary, analytic, and technical personnel needed to continue transforming the agency.[88] Although NSA drastically altered the dynamic of its workforce by making it younger, it continued the overall mission of the agency unabated.

In order to work towards the fourth transformation goal, developing effective business processes, NSA also went outside the agency for help as mentioned earlier, which was one of the recommendations of both the Internal and External Review Teams. General Hayden created the positions of Chief Financial Officer (CFO) and Senior Acquisition Executive (SAE), reporting directly to him. He hired from the outside to bring in acquisition and industry expertise that was not resident to the agency. Both of these people had extensive knowledge in their respective fields, but they also came to the agency with no preconceived notions of how things should be run at NSA. Since they were unaware of the agency's status quo mentality, they were not bound by preconceived notions of the agency, which is critical for developing creativity and innovation.[89] This allowed them to implement major structural changes within the agency. The CFO and SAE are now responsible for consolidating all the financial and acquisition elements that had previously been farmed out throughout the entire agency.

The 9/11 terrorist attacks showed the world how adversaries are devising new asymmetrical methods and strategies to defeat our forces. NSA took some criticism for not having information that could have prevented the 9/11 attacks. Through its numerous transformation efforts, NSA has made an attempt to overcome cultural and institutional barriers in order to ensure vital information gets to the right people at the right time. As General Hayden states, "the ultimate weapon against terrorists is information regarding

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[87] Scott Shane, "Director of NSA Shifts to New Path," *Baltimore Sun Online*, 8 August 2004, http://www.navyseals. com/community/articles/article.cfm?id=4252 (accessed August 2005).

[88] *Black Testimony*, 2.

[89] Tushman and Anderson, 270.

their identity and intent…but intelligence is useless if it doesn't get to the people who need it."[90] The NSA transformation process was accelerated after the 9/11 attacks with three goals in mind: continue to bring in new personnel, keep turning to industry for business and technology solutions, and maintain a social contract with the American people to protect their privacy.[91]

NSA is working hard to change the "stovepipes" mentality and increase the amount of crosstalk and communication between the different intelligence and law enforcement agencies. General Hayden has strengthened relations with other spy agencies by placing more of his officers at the CIA and other locations to improve collaboration.[92] The current phase of transformation at the agency initiated in 2003 is called "Transformation 2.0 – Cryptology as a Team Sport." The four pillars of this next transformation phase consist of "Mission Blending," which is enhancing coordination between the Signals Intelligence Directorate and the Information Assurance Directorate; "Extending the Enterprise," which is coordination across the entire Signals Intelligence enterprise; "Community," or integration with intelligence and Information Assurance partners through the community; and "Cooperating," or collaborating with the agency's clients.[93] These goals again look similar to the ones of the Intelligence Community today in the midst of reform. NSA wants to ensure that warfighters at the operational and tactical levels, as well as the policymakers at the strategic levels, are able to get critical information necessary to make informed decisions. This process worked extremely well in OIF. Marines were able to access NSA computers down to the regiment level, the Army at the division echelon and the Air Force at theater command centers, complementing DoD's network-centric warfare concept and significantly shortening

[90] General Michael V. Hayden, Opening Remarks: Partnerships for Combating Terrorism Forum, 4 March 2002. Transcript available at http://www.nsa.gov/releases/relea00070.html (accessed August 2005).

[91] Judi Hasson, "NSA Director Talks Transformation," *Government Executive Magazine Online*, 3 March 2003, http://www.fcw.com/fcw/articles/2003/0303/web-ipic-03-03-03.asp (accessed August 2005).

[92] Scott Shane, "The Thinking Man's Spy: Michael Vincent Hayden," *New York Times Online News Service*, 18 February 2005, http://www.nytimes.com/2005/02/18/politics/ 18hayden.html (accessed August 2005).

[93] Donnelly, 2.

target identification to time of attack.[94] Additionally, the Bush administration is considering making NSA the lead agency for sharing homeland security information across government computer networks, thus expanding NSA's responsibility to help defend the complex network of data pipelines carrying warnings and other sensitive information.[95] Newly appointed NSA Director Army Lieutenant General Keith Alexander is tasked with continuing down the path of reform and transformation started by General Hayden.

NSA is challenging the existing way that intelligence has operated over the last decade. The Intelligence Community as a whole has undergone a doctrinal shift, moving from a cultural framework of being regarded as a "support" entity to now being fully integrated into military operations. Operations ENDURING FREEDOM (OEF) and OIF showed an unprecedented level of synergy between the intelligence and operations disciplines, especially in increasing the shooter-to-sensor capabilities that get critical near-real-time information to the cockpit to engage time-sensitive targets. When successful, this disruptive innovation surpasses the traditional way that intelligence has been regarded and outperforms the traditional way intelligence has been utilized. Truly integrating intelligence into operations had been underestimated as a concept due to cultural biases that separated the two disciplines. Many senior leaders were not convinced of the capability that intelligence and operations integration could bring to the warfight. According to General Hayden, who was one of the few proponents of intelligence/operations integration in its early stages, says that in today's security environment, there is no distinction between intelligence and operations - intelligence is in itself an operation. He stated that "integration is essential to conducting successful military operations, but it has to be done the right way - intelligence professionals should

[94] Frank Tiboni, "NSA Seeks Signal Analysis Partners," *Federal Computer Week Online*, 29 August 2003, http://www.fcw.com/fcw/articles/2003/0825/web-nsa-08-28-03.asp (accessed August 2005).

[95] "NSA Eyed for Message Traffic," *Washington Times Online News Service*, 15 February 2005. http://www.washtimes.com/business/20050214-094549-3878r.htm (accessed August 2005).

consider themselves part of the fight, and must shed the cultural distinction of being thought of as "supporting" the warfighter."[96]

As the National Military Strategy states, "deterring threats and preventing surprise attacks will place increasing demands on intelligence assets, the agility and decisiveness of the force and the ability to work time-critical issues in the interagency setting...preventative missions require shared, "actionable" intelligence…."[97] As the Intelligence Community attempts to transform, NSA has already undergone a significant transformation process in order to meet the dynamic new intelligence challenges in the information age. SIGINT has consistently provided the nation's decision-makers with additional knowledge and understanding of international developments and threats to the nation's security.[98] Under General Hayden's leadership, NSA moved from a "reactive" agency focused on a single Cold War threat in the industrial age (with an MOE of status quo intelligence gathering indicative of the Cold War era) to a lean, "proactive" agency focused on multiple, regional threats in the information age (new MOE of success in prosecuting the GWOT by actively hunting for vital information of intelligence value). NSA has been a great example of an intelligence agency moving in the right direction to combat today's adversaries in the threat environment of rogue states and terrorist elements. Other agencies, and the Intelligence Community as a whole, are following its lead in the ways of transformation. The Intelligence Community will benefit from General Hayden's move to the DNI's second in command, because of his success at reform efforts at NSA. Gaining an advantage over our adversaries is of the utmost importance in today's dangerous world. NSA's transformation initiatives and innovations will continue to put them at the forefront of America's Intelligence Community and ensure that they will be poised to be successful in the 21st century.

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[96] General Michael V. Hayden, Untitled briefing/address presented at the Air Force Judge Advocate Group School, Maxwell Air Force Base, AL, 9 April 2002.

[97] Chairman, Joint Chiefs of Staff, *The National Military Strategy of the United States of America 2004*, 13 May 2004, 13. Available at http://www.defenselink.mil/news/Mar2005/d20050318nms.pdf (accessed August 2005).

[98] "Senate Report 106-279," 5.

Enhancements in technical intelligence collection will be a large part of the intelligence reform process, which will most affect NSA and NGA. It can be argued that collection is the most critical part of the intelligence process. If there is little or no intelligence collected on an adversary, intelligence analysis will lack substance and be incomplete. The DNI is working on an effort to modernize and upgrade the country's overhead architecture, another priority of the newly established office. According to General Hayden, the DNI will work with intelligence program managers and DoD to improve the requirements, system, and architectural development process for all technical collection systems, and their integration.[99]

D. TACTICAL/OPERATIONAL LEVEL INTELLIGENCE REFORM

All of the initiatives outlined above make it clear that the Intelligence Community is transforming at the strategic, national-level agencies. However, it has been undergoing transforming at the operational and tactical levels as well. A primary example of this transformation has been demonstrated by United States Air Force Intelligence over the last few years with excellent results being produced in OEF and OIF. Air Force Intelligence has been in the process of moving from a cultural framework of being regarded as a "support" entity to being fully integrated into military operations. As the Intelligence Community changes to meet the new security challenges of the 21st century, it is important for the intelligence and operations disciplines to be fully integrated in order to be successful in this post-Cold War environment. The terrorist attacks of 9/11 showed the country how adversaries are devising new asymmetrical methods and strategies to defeat our forces, and that military options may be needed to defeat these adversaries, so intelligence reform must occur at this level as well.

The Air Force's Air Intelligence Agency (AIA) merged with the Air Combat Command's (ACC) 8th Air Force on 1 February 2001, signifying a first step toward fully integrating intelligence operations into warfighting commands at the operational level. This merger was hailed as one of the most important warfighting milestones the history of the Air Force, and may serve as an example for other services. According to then-

[99] *Hayden House Permanent Select Committee Subcommittee on Oversight Testimony,* 4.

ACC Commander and recently retired Air Force Chief of Staff General John Jumper, "this is a natural evolution…it's an idea whose time has come. This integrates our information warfare skills and talents into the normal tactical and operational level of war just as we do fighters, bombers and others."[100] This integration represents the acknowledgment by the operations community of the value of intelligence, which in today's world is critical to having successful military operations. OEF and OIF showed an unprecedented level of synergy between the intelligence and operations disciplines, especially in increasing the shooter-to-sensor capabilities that get critical near-real-time information to the cockpit to engage time-sensitive targets. In Afghanistan, United States combat performance was significantly improved due to an added reliance on precision-guided weapons which were made successful by enhanced Intelligence, Surveillance, and Reconnaissance (ISR) capabilities.[101] The Iraq War produced similar positive results by integrating intelligence throughout operational planning and execution: ISR and targeting capabilities, intelligence dissemination and timeliness, as well as overall situational awareness were all greatly improved.[102] These successes show that if intelligence is integrated fully into military operations, there is a significant increase in operational capability and operational success in this new post-Cold War information era, and the AIA-ACC merger was a first step to achieve that end state.

E. CONCLUSION

The Intelligence Community will continue to play a significant role as the nature of war continues to evolve in the post-Cold War era into asymmetric warfare, information warfare, and terrorism. With the increase in available information, and with the increase in technology, the need continues to grow for policymakers, warfighters, and operational commanders to get timely, tailored, and accurate intelligence information in order to

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[100] "Air Intelligence Agency is Realigned," *Air Force Print News*, 2 February 2001. Article can be found at http://www.ftmeade.army.mil/SoundOFF/archives/SO2001/15Feb2001/html/AirCombat.htm (accessed August 2005).

[101] Anthony H. Cordesman, "The Lessons of Afghanistan: Warfighting, Intelligence, Force Transformation, Counterproliferation, and Arms Control," *Center for Strategic and International Studies,* Washington, DC, 15 May 2003, 18. Article can be found at http://www.csis.org/burke/hd/reports/afghanlessons_exec.pdf (accessed August 2005).

[102] Anthony H. Cordesman, "The Lessons of the Iraq War: Summary Briefing." *Center for Strategic and International Studies*, Washington, DC, 15 July 2003, 10. Article can be found at http://www.csis.org/features/ iraq_instantlessons.pdf (accessed August 2005).

protect American lives and interests. The 9/11 Commission Report, the Intelligence Reform and Terrorism Prevention Act, and WMD Commission have highlighted this urgency by ultimately creating legislation to ensure that our intelligence agencies are working together in the most efficient way possible to prevent another tragedy.

The initiatives outlined in this chapter are by no means an all-encompassing list of the transformation proposals occurring throughout the Intelligence Community today. There are many other initiatives ongoing to ensure that the Intelligence Community is doing everything it can to understand the capabilities and intentions of the enemy, and to ensure that information is integrated into operational plans continuously throughout the planning process. The transformation initiatives outlined here (creation of the DNI position, horizontal integration, persistent surveillance, and Intelligence Campaign Planning initiatives, newly created all-source intelligence centers, and HUMINT, OSINT, SIGINT, and IMINT reforms) are a starting point to reduce or eliminate the "stovepipes" that exist, enabling the Intelligence Community to regain confidence and credibility, and to ensure that intelligence is seamlessly integrated into operations at the strategic, operational, and tactical levels of war. Previous attempts to reform the Intelligence Community have had less than stellar results. However, if these reforms are moderately successful, this will give the United States a better ability to truly know and understand the capabilities and intentions of all of its adversaries, to prevent future attacks against America's interests, and to avoid another intelligence failure like the one seen with Iraq's WMD program. Chapter IV further analyzes these intelligence reforms and applies them to determine how they might better provide insight into North Korea's WMD capabilities and intentions.

IV. A REVAMPED INTELLIGENCE COMMUNITY TO UNDERSTAND NORTH KOREA'S WMD PROGRAM

> While the administration was busy preparing, and then launching, a war to rid Iraq's suspected (and now it seems non-existent) WMD, North Korea may have acquired four times the fissionable materials it had before, or six more nuclear devices.[103]
>
> Jack Pritchard

A. INTRODUCTION

As was outlined in the previous chapter, numerous reform efforts are now occurring within the Intelligence Community to make it a more viable and efficient organization. The issue at hand is that because of the tenuous situation on the Korean peninsula, the United States cannot afford a repeat of the failure to uncover Iraq's WMD program. Despite the intelligence gaps that exist on Pyongyang's WMD operations, North Korea's situation is much more dangerous than Iraq based on what is currently known about the program. An example of the problem that faces the Intelligence Community when working the North Korea problem set was recently seen when the Intelligence Community tried to determine if North Korea was planning a nuclear test in the Spring of 2005. There were differing viewpoints on whether tunneling activity at a North Korean military facility was in fact preparation for a nuclear test. CIA officials espoused a more conservative assessment, stating that North Korea was unlikely to conduct a nuclear test for fear of antagonizing China, its only real ally in the region. Conversely, the White House, the Pentagon, and the offices within the Energy Department all offered a more ominous version of the activity, calling it "unprecedented." The two different assessments were based on satellite-derived

[103] Jack Pritchard, "While the US Looked for Iraqi WMD, North Korea Built Theirs," *YaleGlobal Online*, 31 March 2004, http://yaleglobal.yale.edu/display.article?id=3618 (accessed August 2005). Mr. Pritchard is a North Korea specialist and Special Envoy for Negotiations with North Korea, and served as US Representative to the Korean Peninsula Energy Development Organization in the Bush administration.

intelligence, which left the analysis open to conflicting interpretations and agendas.[104] The divergent intelligence assessments show the difficulty in coordinating these assessments of difficult problem sets such as North Korea.

The difficulty and importance of gaining sound intelligence on a country's unconventional weapons program was made evident in the 1960's when it was discovered that China was working on a nuclear program. The Intelligence Community provided critical information on the Chinese nuclear program, which enabled policymakers to make firm decisions that preserved national security and their efforts to estimate China's nuclear progress, and the effect it would have on the world stage is a historical milestone for the Intelligence Community.[105] Additionally, one could make a case that if the United States had better intelligence capabilities back in the late 1960s and early 1970s, the political and military leadership might not have been surprised by the Russians achieving nuclear parity and eventually surpassing the United States. Better intelligence could have given the leadership critical information on the Russian nuclear program which may have caused the United States not to accept nuclear parity and change their deterrence posture.

These and other intelligence failures highlight the need for improved intelligence to better understand the threat posed by North Korea WMD. For example, in addition to the Iraq WMD failure, two other critical intelligence failures dealing with WMD are: the inability to detect the Indian nuclear test in early May 1998, and a National Intelligence Estimate that incorrectly stated North Korea was at least 10 years away from fielding an intercontinental ballistic missile.[106] The importance of intelligence in determining nuclear capability is evident in both of these failures. The Indian nuclear test that was not

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[104] David E. Sanger and Douglas Jehl, "North Korea Nuclear Goals: Case of Mixed Signals," *New York Times Online News Service*, 25 July 2005. Available at http://www.nytimes.com/2005/07/25/politics/25korea.html?ex=1123214400en=ca096703b03a7cc7&ei=5070&ex=1122955200&en=9498e1ce7d4054d9&ei=5070&emc=eta1 (accessed August 2005).

[105] William Burr and Jeffrey T. Richelson, "Whether to 'Strangle the Baby in the Cradle,'" *International Security*, vol. 25, no. 3 (Winter 2000/01), 98.

[106] Frank Carlucci, ed, *Taking Charge: A Bipartisan Report to the President Elect on Foreign Policy and National Security – Discussion Papers* (Washington, DC: Rand Corporation, 2000), 261. A copy of this document can be found online at http://www.rand.org/publications/MR/MR1306.1/(accessed August 2005)

detected or anticipated by the Intelligence Community was countered with Pakistan conducting a nuclear test of its own a few weeks later on 28 and 30 May. Continued nuclear proliferation between those two countries will undoubtedly destabilize the entire region. Additionally, the failure to provide an accurate assessment of North Korea's intercontinental ballistic missile capability means that the United States underestimated the fact that North Korea could put a nuclear weapon on a long range missile and could threaten regional neighbors. Intelligence Community assessments state that the multiple-stage Taepo Dong-2 long range missile may be capable of reaching parts of the United States with a nuclear weapon-sized payload, but there is no consensus on whether or not North Korea has perfected that capability as of yet. The importance of gaining better intelligence to uncover aspects of the North Korean unconventional weapons program is clearly evident. Any changes that the Intelligence Community makes will have a direct effect on discovering the weapons proliferation plans of rogue nations, specifically North Korea.

The Intelligence Community does have a success story when it comes to understanding the WMD capabilities of a known adversary. In the case of Libya, the Intelligence Community was extremely successful in crafting an accurate assessment of Colonel Qaddafi's unconventional weapons program. It can be argued that the Intelligence Community had a considerable effect on Libya dismantling its WMD program. The Intelligence Community had focused on Libya's efforts in state-sponsored terrorism for decades. As Libya turned its attention away from terrorism and moved towards WMD proliferation in the 1990s, the Intelligence Community's tenacity in detailing the Libyan problem set allowed it to keep policymakers and military commanders informed of Libya's WMD operations and facilities. The WMD Commission report explained that the Intelligence Community, although not perfect, had generally accurate assessments of the Libyan unconventional weapons programs. The report stated that the Intelligence Community "had intelligence on facility locations, personnel involved in the programs, and Libya's cooperative efforts with other nations."[107] The intelligence efforts were able to give civilian and military

[107] WMD Commission Report, 259.

decisionmakers enough information to allow them to make informed decisions to deal with Libyan threat. By having accurate intelligence, it also allowed the bring allies aboard in condemning Libya, and also allowed the United States to be aggressive in coercing Libya to do away with its program. According to CIA Director Porter Goss, Libya serves as "a good news story, one that reflects the patient perseverance with which the Intelligence Community can tackle a tough intelligence problem."[108]

So how can the Intelligence Community learn from the cases of Iraq and Libya to understand North Korea's unconventional weapons program? Today's intelligence reform efforts such as the establishment of the DNI, creation of national intelligence centers and the National Counterproliferation Center, HUMINT, SIGINT, IMINT and OSINT initiatives, horizontal integration, and persistent surveillance all are useful first steps in the right direction. In this chapter, I further analyze these intelligence reforms and put them into categories of collection, analysis, and collaboration. I then show how these changes within the Intelligence Community could lead to better insight on the North Korea WMD program and North Korea as a whole.

B. INTELLIGENCE COLLECTION

Intelligence collection is probably the most important part of the intelligence cycle. Intelligence collection can be more specifically defined as "matching validated intelligence objectives to available sources of information, with the results to be transformed into usable intelligence."[109] In today's information age, there is so much information to be collected that sifting through the vast amount of data can often become problematic. General Hayden summed up the information problem when he explained, "Forty years ago, there were 5,000 stand-alone computers, no fax machines and not one cellular phone. Today, there are over 180 million computers—most of them networked. There are roughly 14 million fax machines and 40 million cell phones, and those numbers

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[108] Porter J. Goss, "Global Intelligence Challenges 2005: Meeting Long-Term Challenges with a Long-Term Strategy," *Testimony of Director of Central Intelligence Porter J. Goss Before the Senate Select Committee on Intelligence*, 16 February 2005, 4. A transcript of Goss' testimony can be found online at http://www.cia.gov/cia/ public_affairs/speeches/2004/Goss_testimony_02162005.html (accessed August 2005). Hereafter referred to as Goss Testimony.

[109] Lisa Krizan, *Intelligence Essentials for Everyone* (Washington, DC: Joint Military Intelligence College, 1999), 22.

continue to grow."[110] The information collected must then be turned into useful intelligence on a particular problem set. As stated earlier, the problem with North Korea is the insular nature of the country, which presents a challenge to the intelligence apparatus tasked with collection on the country. Severe criticism was levied upon the Intelligence Community in the WMD Commission report regarding intelligence collection on North Korea, saying that the community had only a "limited ability to engage in long-term, coordinated planning on existing threats, let alone to anticipate surprises."[111] This section examines the various intelligence collection disciplines and analyzes how the reforms within those disciplines will help better understand the North Korean threat WMD threat.

1. HUMINT

Reform efforts are calling for an overall increase in the amount of human intelligence agents engaged in spy operations around the world as well as more aggressive field operations. There must be an increased focus on HUMINT to deal with the North Korean WMD threat. Donald Gregg, who spent time as a CIA officer and Ambassador in Korea, stated that the HUMINT situation in North Korea left much to be desired. Gregg professed, "My efforts as the senior CIA officer in Korea to produce significant intelligence on North Korea were totally unsuccessful...North Korea remains one of the longest-running intelligence failures in the history of U.S. espionage. North Koreans were difficult to approach and almost impossible to recruit and control…."[112] Penetrating an insular country like North Korea will undoubtedly take time and will be an extremely difficult challenge, but it is a vital part on any intelligence collection plan. There is no better intelligence than first-hand accounts of what is occurring in the operating area. However, there are a limited number of spies operating in North Korea, and the Intelligence Community has to negate the North Korea's skilled

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[110] General Michael V. Hayden, Address to Kennedy Political Union of American University, Washington, DC, 17 February 2000. Transcript available at http://www.nsa.gov/releases/relea00057.html (accessed August 2005).

[111] WMD Commission, 356.

[112] Donald P. Gregg, "A Long Road to P'yongyang," *The Korea Society Quarterly*, Vol. 3, no. 1 (Spring 2002), http://www.koreasociety.org/TKSQ/FeatureArticles/V-3/03_1_SPRING2002_DPG.html (accessed August 2005).

counterintelligence techniques and effective use of denial and deception.[113] Senator Saxby Chambliss (R-Georgia), a member of the Senate Select Committee on Intelligence, is one of many who agree with the theory of HUMINT being the most important of the intelligence disciplines. In discussing the importance of focusing on increasing America's HUMINT capabilities, Senator Chambliss stated,

> HUMINT is a dirty business, a dangerous profession, and we must be prepared to accept the risks associated with spying on those who seek to harm us, whether they be a small terrorist cell, a larger international terrorist organization, or a rogue nation-state. North Korea, for example, is developing the means to deliver nuclear weapons to close and important allies, like Japan, or to our own state of Hawaii and our Pacific Coast—we cannot afford to let down our guard or relax our intelligence awareness.[114]

The United States and the Intelligence Community must not become too wedded to HUMINT-derived information. HUMINT is not a panacea; it has a number of significant limitations. It is susceptible to deception, and it can be time consuming to gain just a small amount of valuable intelligence. To be effective, HUMINT must be fused with other intelligence disciplines in an all-source methodology. Intelligence derived from human sources can be used to cue other intelligence systems to uncover more information. However, the proposed increase in the level of effort within HUMINT will aid in gaining better intelligence on the North Korean unconventional weapons program.

2. OSINT

The Intelligence Community must also increase the level of effort and place a new emphasis on open source intelligence, and it appears that this will be a priority for the DNI. Previously, open source information has not been placed in high regard. Intelligence analysts tend to focus on the "classified" part of intelligence, believing that unclassified information has little value in understanding a difficult problem set like North Korea, but intelligence collected via covert means has more value. This is a common misconception. However, like HUMINT, open source information can enhance

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[113] David E. Sanger and Douglas Jehl, "North Korea Nuclear Goals: Case of Mixed Signals," *New York Times Online News Service*, 25 July 2005. Available at http://www.nytimes.com/2005/07/25/politics/25korea.html?ex=1123214400en=ca096703b03a7cc7&ei=5070&ex=1122955200&en=9498e1ce7d4054d9&ei=5070&emc=eta1 (accessed August 2005).

[114] Senator Saxby Chambliss, "We Have Not Correctly Framed the Debate on Intelligence Reform," *Parameters* (Spring 2005), 7.

the other intelligence disciplines, and cue sensors to focus on information that may be of intelligence value. Critics of OSINT-derived information say that little intelligence can come out of an isolated country such as North Korea. But despite North Korea's insular nature, proponents of OSINT explain that open source information can provide much more intelligence than was previously assumed.

Readily available information on North Korea comes from its limited media outlets. With only two main newspapers that spout the party propaganda, one media outlet in the Korea Central News Agency, no opposition press, and minimal internet access throughout the country, there is only a finite amount of information that comes out of these outlets. Former Australian diplomat Dr. Adrian Buzo, who briefly lived in Pyongyang, warns analysts to not so easily dismiss OSINT-derived information on North Korea. He states explains that the North Korean media is a "continuing record of the regime's priorities, of its ideological concerns, and of key personnel changes…sustained exposure to the DPRK media is an essential requirement for the would-be analyst…."[115] Because of the dearth of HUMINT from North Korea, open source information that originates from North Korea can provide intelligence analysts with a plethora of insight into North Korea's operations and culture. That insight may lead to clues on North Korea's clandestine operations, which will in turn prompt other collection assets to focus on new areas of interest. The increased focus on OSINT within the Intelligence Community, and specifically within CIA will seek to exploit this valuable but little used source.

3. SIGINT and IMINT

Signals intelligence faces similar challenges to HUMINT collectors on the North Korea problem set. It is difficult to collect communications on a target that restricts communication of its people. However, the changes that have been made at NSA have set the agency on the path to uncover the dangers posed by our adversaries. NSA went from passively collecting intelligence to aggressively hunting for intelligence. This concept is critical to gaining a decisive edge in understanding the North Korea unconventional weapons threat. Because of North Korea's use of denial and deception,

[115] Mercado, 5.

as well as its keen use of emissions control, SIGINT analysts will have to become much more aggressive when searching out North Korean communications. A more aggressive SIGINT plan, buoyed by NSA's improved information technology network and telecommunications architecture via GROUNDBREAKER and TRAILBLAZER, will allow the agency to collect more information on North Korea's WMD program, and on North Korea as a whole. Persistent surveillance initiatives will address the threat by giving the Intelligence Community the ability to have a constant SIGINT collection effort against the North Korean target. In the event that the United States find itself in a confrontation with North Korea, the integration efforts ongoing at NSA are enabling military units at the tactical levels to access NSA databases to lessen the timeline from target identification to time of attack.[116] This should prove invaluable in the event of an attack against North Korea WMD or conventional military assets.

There remains a critical need for geospatial intelligence to locate WMD facilities and to uncover hard and deeply buried targets (HDBT) targets in a conflict with North Korea. This is arguably the most difficult challenge the Intelligence Community faces when trying to uncover data on the North Korea WMD program. North Korea's nuclear program alone poses a significant challenge in locating and ultimately targeting its nuclear assets. Even though the Intelligence Community has a decent amount of information about North Korea's the nuclear reactors, fuel fabrication facilities, and reprocessing facilities that constitute the critical parts of the program, Pyongyang could still have clandestine reprocessing facilities that might be located in underground hidden locations.[117] Locating any type of uranium enrichment facility will also present challenges. There is still an intelligence gap regarding North Korean uranium enrichment facilities, although a few sites have been identified as suspected sites. With the large amount of underground and hidden facilities buried in North Korea, geospatial

[116] Frank Tiboni, "NSA Seeks Signal Analysis Partners," *Federal Computer Week Online*, 29 August 2003, http://www.fcw.com/fcw/articles/2003/0825/web-nsa-08-28-03.asp (accessed August 2005).

[117] Phillip C. Saunders, "Military Options for Dealing with North Korea's Nuclear Program," *Center for Nonproliferation Studies Online*, Monterey Institute of International Studies, 27 January 2003, http://cns.miis.edu /research/korea/dprkmil.htm (accessed August 2005).

intelligence will play a large role in identifying HDBT targets. The North Korean's use of denial and deception tactics will make targeting even more problematic.

Persistent surveillance and horizontal integration and should play a large role in IMINT's efforts to target and track North Korea's WMD assets. Persistent surveillance efforts will affect NGA's role in North Korea WMD. In order to discover suspected NBC facilities, detect HDBTs, or defeat North Korean denial and deception efforts, NGA must have a continuous collection capability throughout air, space, and ground. This capability could prove to be useful during a military confrontation with North Korea, as the need for time-sensitive battle damage assessments increases. Horizontal integration is designed to merge analysis of an enemy's capabilities and intentions in a user-friendly environment. NGA's geospatial knowledge base (GKB) will aid in integrating intelligence assets in order to ensure all known elements of the North Korea unconventional weapons program are a part of the GKB and shared through the Intelligence Community. NGA's Future Intelligence Requirements Environment integration initiative will pull information from different intelligence agencies and use analytical tools for simulations and models that can be used to understand the North Korean problem set. Further intelligence integration and collaboration efforts will be discussed later in this chapter.

IMINT and SIGINT analysts may find themselves faced with an additional challenge as a result of a recently passed bill in the House of Representatives. The 2006 Intelligence Authorization Bill eliminates or decreases funding for a small amount of extremely expensive satellite programs. Congressional overseers of the satellite programs believe that the programs are suffering from mismanagement and poor performance, so the bill calls for the curtailment of these programs. In the long term, this may have detrimental effects on how the Intelligence Community prosecutes the North Korean WMD targets.

4. Legal Issues

Regarding intelligence collection operations, the Intelligence Community must be given the freedom to get close to the line of legality when performing intelligence operations. There are numerous rules and regulations that govern collection operations to

ensure that the fourth amendment rights of American citizens are being protected. However, if the Intelligence Community is serious about dealing with the North Korea WMD program, it will have to make some adjustments when it comes to being aggressive about collection intelligence on the enemy. At a recent hearing of the Senate Select Committee on Intelligence, the nominee to be the General Counsel for the DNI, Benjamin Powell, announced that the DNI's office will conduct a review of the privacy rules to ensure that intelligence agencies are able to conduct their operations fully without infringing on civil liberties. Committee Chairman Senator Pat Roberts (R-KS) urged the DNI's office to push the limits of the law, but to not let apprehension prevent or restrict intelligence operations. Roberts succinctly stated,

> The challenge today is not so much keeping intelligence officers from stepping across the legal line, no one wants that, but (rather) getting them to even come close to those lines. I expect the lawyers of the intelligence community -- along with its analysts and operators — to step right up to those lines — don't go over them, but step up to them.[118]

In order to uncover North Korea's unconventional weapons program, intelligence collection efforts will have to push the limits of legality and be much more aggressive than ever before.

C. INTELLIGENCE ANALYSIS

With the increased amount of information that flows into collection systems, the intelligence analysis part of the process is almost as critical as the collection itself. If the intelligence is collected, but no one is able to analyze it, or if the analysis is faulty or incomplete, it is not useful to policymakers and military decisionmakers, which ultimately puts American lives and interests at risk. The WMD Commission cited intelligence analysis as a significant problem. It stated, "Analysts are the repositories for what the Intelligence Community doesn't know, and they must clearly convey these gaps to decisionmakers—as well as to collectors so that the Intelligence Community does everything it can to fill the holes."[119] A critical problem that exists regarding intelligence

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[118] Shaun Waterman, "Intelligence Chief to Review Privacy Rules," *UPI Online News Service*, 25 July 2005, http://www.wpherald.com/storyview.php?StoryID=20050725-124949-8482r (accessed August 2005).

[119] WMD Commission, 27.

analysis is that significant amounts of money are allocated for intelligence collection, but the amount of money spent for intelligence analysis is not proportional. This results in a serious dilemma - more information being collected than people available to analyze the vast amount of information. This situation then results in intelligence being insufficiently scrutinized and numerous hypotheses left unanalyzed. Ultimately, oversights such as these lead to the faulty analysis of the Iraq WMD scenario.

To guard against this problem, one analytical concept that deserves discussion is a model called Analysis of Competing Hypothesis (ACH). When using this concept, an analyst identifies a number of alternatives and has the alternatives compete against one another. This is designed to get analysts to stray away from solely looking at one theory and selecting information that fits that theory. If evidence exists to support the analysts' theory, the analyst believes his/her theory is correct and ceases to look for any further evidence. If the evidence does not support the theory, the evidence is discarded, and the analyst looks for more evidence to support the one theory. Traditional intelligence analysis settles only for the first hypothesis that seems acceptable, and does not provide for the analysis of different options. However, ACH involves searching for evidence in order to refute hypotheses. According to Richards J. Heuer, Jr., author of Psychology of Intelligence Analysis, "The most probable hypothesis is usually the one with the least evidence against it, not the one with the most evidence for it…conventional analysis generally entails looking for evidence to confirm a favored hypothesis."[120] One can argue that this type of analysis would have been useful for the Iraq WMD situation. It seemed that none of the intelligence agencies wanted to examine an alternate theory that Iraq no longer possessed WMD. By using ACH, the theory that Saddam Hussein no longer had WMD would have been examined much more closely and taken more seriously as a possible scenario.

Senior decisionmakers recognize the need for competitive intelligence analysis. CIA Director Porter Goss testified in February 2005 in front of the Senate Select

[120] Richards J. Heuer, Jr., *Psychology of Intelligence Analysis*. Center for the Study of Intelligence, Central Intelligence Agency, 1999. Portions of this book can be found online at http://www.cia.gov/csi/books/19104/ (accessed August 2005).

Committee on Intelligence explaining his agency's efforts in this realm. Goss stated "I am asking for more competitive analysis, more collocation of analysts and collectors, and deeper collaboration with agencies throughout the Intelligence Community. Above all, our analysis must be objective. Our credibility rests there."[121] Former Secretary of State Colin Powell also believed that competitive analysis and collaboration was important for better intelligence. Testifying in front of the Senate Governmental Affairs Committee in September 2004, Secretary Powell stated,

> We also need to take advantage of complementarities, synergy, competitive analysis, and divisions of labor…what I need as Secretary of State is the best judgment of those most knowledgeable about the problem. [We] need comparable and complementary expertise elsewhere in the IC. This additional expertise ensures that as much information and as many perspectives as possible have been considered, that differences are highlighted, not muted, and that the sum total of intelligence requirements can be met by combining the different expertise of all IC constituent agencies.[122]

The DNI's new Strategic Analysis Unit will be tasked with helping to develop alternative intelligence analysis, create new procedures to review the analysis career field and to evaluate the reliability of finished intelligence products, and rebuild the expertise of intelligence analysts to ensure the integrity and credibility of intelligence products.[123] This will be critical in helping to work the North Korea threat. The problems that were seen with the Iraq NIE that was hastily put together in the months before OIF would be avoided with these new changes. The new procedures should ensure that finished Intelligence Community products will have analysis and input from all of the various agencies. These procedures should also facilitate the use of competitive analysis, which will be necessary for understanding the North Korean problem set. Because of North Korea's unpredictable nature, divergent assessments on the intentions of Kim Chong-il exist. Competitive analysis will help to pull the varying analyses on North Korea and its unconventional weapons program and come up likely scenarios for all the different

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[121] Goss Testimony, 1.

[122] Colin L. Powell, *Opening Remarks on Intelligence Reform*, Senate Governmental Affairs Committee, 13 September 2004, 4. A transcript of the remarks can be found online at http://hsgac.senate.gov/_files/ 091304powell.pdf (accessed July 2005).

[123] *Hayden House Permanent Select Committee Subcommittee on Oversight Testimony*, 2.

hypotheses, even if those scenarios seem implausible, or if they go against the most popular theory. It is important that intelligence analysts do not become too attached to their assumptions on the North Korean threat, or else they will make the same faulty assumptions as they did with Iraq's WMD program. Allowing for differing analytical assessments instead of pushing for community consensus will give analysis the ability to lay out all the possibilities, and try to come up with the most accurate assessment and course of action.

D. INTELLIGENCE COLLABORATION

Once information has been collected on North Korea's WMD program and analyzed, that information must be shared so that all parties involved has access to the same intelligence. As all of the intelligence reform commissions have pointed out, there is a critical need for collaboration between the intelligence agencies. The WMD Commission sharply criticized the Intelligence Community in regards to collaboration and information sharing. The Commission acknowledged that "information sharing still depends too much on physical co-location and personal relationships as opposed to integrated, Community-wide information networks. Equally problematic, individual departments and agencies continue to act as though they own the information they collect, forcing other agencies to pry information from them."[124] The most important and most controversial of the 9/11 Commission recommendations was to create a DNI position to unify the Intelligence Community. The 9/11 Commission stated that one of the two main jobs of the National Intelligence Director should be "to oversee national intelligence centers that combine experts from all the collection disciplines against common targets— like counterterrorism or nuclear proliferation."[125] The DNI is tasked with getting the fifteen intelligence agencies to work closer together. More importantly to this discussion, the need for collaboration is vital to understanding the North Korea WMD program. Intelligence agencies must move from a methodology of "need to know" to "need to share." This is an inherently difficult concept for the Intelligence Community to embrace. The whole nature of intelligence is based on secrecy and

[124] WMD Commission, 14.

[125] 9/11 Commission Report, 20-21.

compartmentalization. In addition, many intelligence analysts have been performing their tasks in the same way for many years, and it may take time for changes in collaboration to be seen. As one intelligence analyst put it, "the view from my cubicle is limited in matters of overall organization charts, [but] increased collaboration should help in general."[126] However, in order to deal with the North Korean WMD threat, intelligence agencies will have to let go of their traditional stovepipe mentality and share information.

Collaboration will enable the different intelligence agencies to work together by putting all the intelligence data in one place, providing the military and political leadership with a comprehensive assessment of what is known about North Korea's operations and filling in the intelligence gaps that exist today. The Intelligence Reform and Terrorism Prevention Act gives the authority to the DNI to create National Intelligence Centers that will consolidate all-source intelligence into one place to perform analysis. The DNI is tasked with ensuring that these national intelligence centers and the rest of the Intelligence Community collaborate with each other. The Act specifies that "the Director of National Intelligence shall, to the extent appropriate and practicable, ensure that each national intelligence center and the other elements of the intelligence community share information in order to facilitate the mission of such center."[127] National Intelligence Centers are necessary to encourage collaboration and provide all-source analysis of intelligence. This initiative will be critical to gaining a better understanding of the North Korea unconventional weapons program.

The Act also created the National Counterproliferation Center (NCPC), which will be responsible for developing all-source intelligence support for counterproliferation efforts. This center will develop a repository for current and historical analysis on the North Korea WMD program by pulling intelligence from all of the intelligence agencies. Fused intelligence in the NCPC should give decisionmakers a comprehensive picture of

[126] Anonymous Intelligence Community Intelligence Analyst (name withheld), E-mail Correspondence to Author, Subject: "Request for Information," 25 August 2005.

[127] *Intelligence Reform and Terrorism Prevention Act*, 42.

Pyongyang's unconventional weapons program, and the new emphasis on collaboration will ensure unity of effort to uncover the secrets of the North Korean regime.

The Intelligence Community must develop a method to provide incentives for intelligence analysts to share information. Whether it is a type of financial incentive or an incentive based on promotion towards future rank, the Intelligence Community needs to come up with a way to encourage analysts to collaborate. Stovepipes that are created due to classification reasons and "need to know" issues can be accepted up to a point. However, stovepipes that exist because of a need to keep information solely in an analyst's domain are unacceptable and do a disservice to the intelligence profession. With North Korea, the Intelligence Community cannot afford to have crucial pieces of intelligence residing in one agency, and other agencies looking for the missing piece not knowing that the information they seek is sitting on the other side of the Washington, DC beltway. North Korea has gone through extensive efforts to conceal its WMD program, and it will take the combined, consolidated efforts of the Intelligence Community to reveal Pyongyang's capabilities and intentions.

E. CONCLUSION

The Intelligence Community has taken its share of criticism, especially in the aftermath of the 9/11 terrorist attacks. It has not been easy for the Intelligence Community to provide the quality analysis needed for decisionmakers to protect the United States. Admittedly, the Intelligence Community has made mistakes in accomplishing that goal. In its defense, despite a forty billion dollar budget, resources have been stretched to the limit and have to be distributed throughout a vast worldwide enterprise. The Intelligence Community also has to answer to many different customers throughout the world, to include policymakers, military commanders, congressional leaders, and allies. America's enemies today often do battle more on an ideological front than based on geopolitical boundaries, which makes it difficult to find, fix, and track our adversaries. The Intelligence Community today is faced with numerous challenges in this post-Cold War world, trying to understand the intentions and capabilities of dangerous nation-states and stateless terrorist elements. None of these constraints will disappear in the near term. Nonetheless, the extensive intelligence reform effort will

allow the Intelligence Community to face these challenges and minimize the constraints placed upon it, and ultimately prevent a repeat of the Iraq WMD intelligence failure.

Thus far, this thesis has shown that changes and reform efforts ongoing in the Intelligence Community will lead to a greater understanding of the difficult problem of North Korea's unconventional weapons program. In this chapter, I have illustrated how new intelligence reforms such as the establishment of the DNI, creation of national intelligence centers and the National Counterproliferation Center, various HUMINT, SIGINT, IMINT and OSINT initiatives, horizontal integration, and persistent surveillance will help to develop better assessments on North Korea's unconventional weapons program. Changes within the Intelligence Community will certainly take time to occur, and there is no guarantee that all of the intelligence reform efforts will be successful. However, if these reform efforts progress, the Intelligence Community will be able to develop a more comprehensive and accurate effort against the North Korean threat. There is also a chance that, as in the case of Libya, as we gain more information, the intensive efforts of the Intelligence Community will help to ultimately persuade the North Korean regime to dismantle its dangerous program. The final chapter of the thesis will examine if there is anything else, in addition to intelligence reform that will help to better comprehend the North Korea WMD threat, and eventually better understand North Korea as a whole.

V. CONCLUSION

> [N]one of us should be surprised by the prominence of North Korea as a challenge for policymakers and intelligence analysts. In a very real sense, it is one of the inevitable issues of American foreign policy. Inevitable because—no matter what level of engagement we may want—the North seems sure to engage us. It could be across a table. It could be with the consequences of its negative behavior or its own instability. Or it could be some combination of them all....[128]
>
> John E. McLaughlin, 17 April 2001

A. INTRODUCTION

The North Korean question must be answered before the situation enters a dangerous phase. An unpredictable North Korean adversary with unconventional weapons and the ability to sell these weapons places the Pacific region and the international community in a precarious situation. It is critical that the United States understand as much as it can about North Korea's WMD program, and more importantly understand how these weapons might be used in a military confrontation against the United States and its allies. As this thesis has explained, the Intelligence Community has serious flaws that must be rectified immediately in order to deal with the challenging problems North Korea and other threats present. These flaws have been addressed in depth by the 9/11 Commission, the Intelligence Reform and Terrorism Prevention Act of 2004, and the Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction and outlined in this thesis. These intelligence reforms are a result of the perceived intelligence failures that have occurred in the last ten years to include the 9/11 terrorist attacks on the Pentagon and the World Trade Center, the lack of weapons of mass destruction in Iraq, and faulty intelligence assessments that have underestimated or overestimated the threats of such countries as Iran, North Korea, and others.

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[128] John E. McLaughlin, "North Korea: Engagement or Confrontation," Remarks by the Deputy Director of Central Intelligence to Texas A&M Conference, 17 April 2001. McLaughlin is the former Deputy Director of the CIA. A transcript of the speech can be found at http://www.cia.gov/cia/public_affairs/speeches/2001/ddci_speech_04172001.html (accessed July 2005).

Although many of the successes of the Intelligence Community are not publicized to the general populace due to security reasons, the recent failures of the Intelligence Community have been too glaring to overlook. In its defense, the Intelligence Community has been overwhelmed and too constrained to effectively warn the nation of every impending adversary action. However, under the leadership of the new DNI, the Intelligence Community is making the necessary adjustments to better understand the dynamic threats that face the United States today. This final chapter will review the main findings of the thesis and their implications for a more comprehensive understanding of North Korean WMD. Next, I will examine whether or not a strategy of engagement with the DPRK could enhance intelligence capabilities on the North Korean threat. Finally, I will briefly look at the implications of intelligence reform on other difficult challenges such as Iran, terrorism, and proliferation efforts.

B. SUMMARY OF FINDINGS

1. Intelligence Collection

Despite the technological superiority of the United States, the Intelligence Community has a difficult challenge regarding intelligence collection. The threats posed to American and allied forces and interests are constant and unyielding. Keeping watch over all of these threats is an almost insurmountable task, but one that the Intelligence Community must face. It has been often argued that many of the intelligence failures are partially the result of the litany of demands placed upon the intelligence apparatus. The reforms discussed in Chapter III that are now occurring within the Intelligence Community should help intelligence collection assets gain a better grasp of the North Korea unconventional weapons threat posed to the international community. Ongoing HUMINT, OSINT, IMINT, and SIGINT reform efforts should help the Intelligence Community better collect the intelligence it needs to in order to unravel the secrets of the North Korean regime and bring elements of its WMD program to light. To summarize, the following is a graphical depiction of the intelligence collection reforms and their implications on the DPRK's unconventional weapons program.

Key Initiatives and Implications

Intelligence Collection Reforms and North Korean WMD Program

Collection	*Reform Initiative*	*Expected Impact*
HUMINT	**- 50% increase in HUMINT trained personnel** **- Increased # of R&D agents tracking WMD**	**- Possible increase in first hand accounts of DPRK activity/culture**
OSINT	**- New CIA Open Source organization**	**-Increased insight into DPRK culture and operations** **-Cue other intelligence assets**
SIGINT	**- NSA Transformation 2.0** **- Persistent Surveillance** **- Horizontal Integration**	**-Improved information technology network and telecommunications architecture to prosecute DPRK WMD** **- Increased collaboration and integration with intelligence agencies and lower echelon units**
IMINT	**- FIRE Collaborative Tool** **- Geospatial Knowledge Base** **- Persistent Surveillance** **- Horizontal Integration**	**- Increased ability to combat DPRK denial, deception, and HDBT effort** **-Increased collaboration and integration with Intelligence Community** **-Collaborative analytical tools to model WMD threats** **-Continuous collection capability to better understand DPRK threat**

Figure 4. Intelligence Collection Reforms and Impact on DPRK's WMD Programs

As shown, intelligence collection reforms should have some impact on how the Intelligence Community deals with the North Korea WMD threat. As explained in Chapter IV, an aggressive HUMINT plan, enhanced by an increase in the amount of spies working in the field, will help gather crucial "eyes-on" intelligence to determine North Korea intentions and capabilities. A new emphasis on OSINT will allow the Intelligence Community to enhance the other intelligence disciplines by supplementing them with publicly available open source information. SIGINT will also be extremely important in determining an enemy's unconventional weapons capabilities and intentions. As discussed in Chapter III, in the post-Cold War era, NSA has had difficulty keeping up with the pace of technology. However, NSA's dramatic transformation from a "reactive" agency focused on Russia to a "proactive" agency focused on multiple, regional threats have put the agency in position to be successful dealing with threats in today's international climate like North Korea. Finally, NGA's innovative collaborative efforts should make it more successful in uncovering North Korean denial and deception efforts.

The combination of the Intelligence Community intelligence collection reform efforts should have direct effects on how adept the community will be at providing answers on the North Korean unconventional weapons threat.

2. Intelligence Analysis

One of the priorities of the DNI is the rebuilding of the intelligence analysis process. The Intelligence Community endured much criticism from the various commissions tasked to examine the failures of the intelligence effort on problem sets such as Iraq, North Korea, and Iran. As examined earlier, the DNI's office is in the process of building a Strategic Analysis Unit, which will establish new procedures to prevent the analytical inconsistencies witnessed in the Iraq WMD analysis. More emphasis will be placed on alternative analysis and ensuring all agencies with a stake in the process have input into analytical products. Below is a list of implications of intelligence analysis reform on the DPRK's WMD program.

Key Initiatives and Implications

Intelligence Analysis Reforms and North Korean WMD Program

Reform Initiative	*Expected Impact*
Strategic Analysis Unit	-**Development of alternative and competitive analysis to better understand DPRK WMD capabilities and intentions** -**Rebuild the expertise of intelligence analysts to ensure the integrity and credibility of intelligence products to prevent repeat of Iraq WMD failure** - **Finished Intelligence Community products on DPRK with analysis and input from all of the various agencies**

Figure 5. Intelligence Analysis Reforms and Impact on DPRK's WMD Programs

The Intelligence Community can ill afford to suffer the same problems it encountered in the Iraq WMD analysis as it deals with the DPRK WMD threat. Reform efforts should refine the analytical expertise resident to the Intelligence Community to allow it to provide timely and accurate analysis to key decisionmakers. The DNI's office considers intelligence analysis as an important part in the intelligence reform process. General Hayden stated, "One of our highest priorities [is] ensuring that our finished intelligence products are timely, objective, accurate, actionable, and based on all sources of available information.[129] The reforms within intelligence analysis will make strides in understanding the North Korea unconventional weapons threat.

3. Intelligence Collaboration

The harshest criticism of the Intelligence Community has come from those stating that the biggest problem of the Intelligence Community is its refusal to share information between agencies. That is expected to change because of the intelligence reforms initiated by the DNI and some of the individual intelligence agencies. Within intelligence collaboration, here are the initiatives and the implications for North Korea's WMD program.

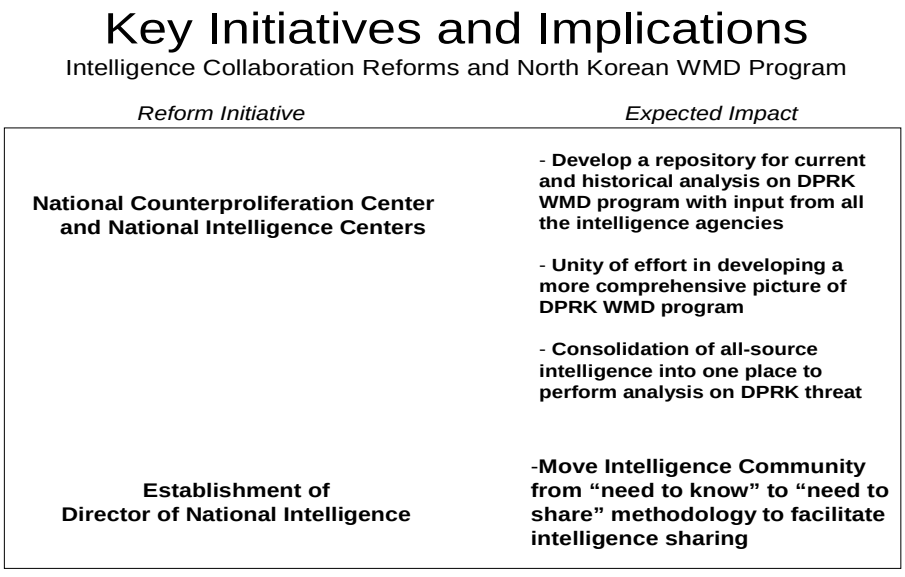

Figure 6. Intelligence Collaboration Reforms and Impact on DPRK's WMD Programs

[129] *Hayden House Permanent Select Committee Subcommittee on Oversight Testimony,* 2.

Information sharing amongst the intelligence agencies will be a difficult challenge. DNI Negroponte explained his role in this daunting task to Congress at his nomination hearing in April 2005. He stated, "My objective will be to foster proactive cooperation among the fifteen Intelligence Community elements. We must make sure that information generated in one part of the community is accessible to other parts of the community."[130] Efforts of the DNI to increase the amount of information sharing and collaboration between intelligence agencies will allow SIGINT and IMINT collection efforts to be fused into all-source analysis to give a comprehensive picture of the threats facing the United States and its allies. The creation of national counterproliferation and intelligence centers should aid in consolidating intelligence analysis in a centralized location, which will allow all-source analysts to access information from the various agencies. Intelligence sharing should give the Intelligence Community the ability to develop a more comprehensive assessment of the DPRK's unconventional weapons program.

C. A NORTH KOREA STRATEGY TO AID THE INTELLIGENCE COMMUNITY

All of these reforms should improve the Intelligence Community's efforts to understand the North Korean problem set. Nevertheless, intelligence reform alone will not completely reduce the intelligence gaps that exist on North Korea. A different strategy approach to complement intelligence reform efforts should enhance our knowledge on North Korea even further. Although there are a number of strategies that the United States can undertake such as economic sanctions or coercive strategy of preventive or preemptive war, a more diplomatic strategy of engagement could address the North Korea crisis and stimulate new ideas to mitigate the potential threat to international stability. An engagement strategy should help reduce the uncertainty of North Korea's WMD program. Currently, it does not appear that the United States has a clear strategy in place to deal with the North Korean nuclear issue, and it was only recently that the North Korean nuclear issue became a priority with the current administration. Additionally, the United States remains concerned with North Korea's

[130] Negroponte, 3-4.

chemical and biological weapons programs because of the immediate threat those weapons pose to the over 37,000 American troops stationed on the peninsula. The continued development of these dangerous weapons has significant and precarious implications on United States strategy and policy, as well as ramifications for the Intelligence Community.

A strategy of engagement with North Korea could allow the Intelligence Community to more effectively use the resources at its disposal to understand the capabilities and intentions of Kim Chong-il's regime. Because North Korea is apt to conceal its capabilities and intentions order to increase its leverage power and to condition the international community to accept its nuclear weapons program, there is limited information available about Pyongyang by which to base intelligence assessments. As is the nature of intelligence, there are inherent difficulties in fully understanding the North Korean nuclear, biological, and chemical weapons problem. North Korea is an isolationist country, making it extremely challenging to obtain timely and accurate information on their activities and operations. Therefore, intelligence plays a key role in understanding the capabilities and intentions of North Korea with regards to their WMD programs. As stated earlier in this thesis, the problem is that the Intelligence Community will always have difficulty warning the nation of every enemy operation. As a result, the Intelligence Community is transforming itself in order to more effectively meet the challenges of numerous rogue adversaries who have aspirations to obtain nuclear, biological, or chemical weapons. As stated in the Nuclear Posture Review, "significant capability shortfalls currently exist in finding and tracking mobile and relocatable targets and WMD sites, locating, identifying, and characterizing hard and deeply buried targets, [and] providing intelligence support to Information Operations and federated intelligence operations."[131] Providing military and civilian decision-makers with a complete and accurate intelligence picture of the enemy has become problematic, specifically when trying to uncover intelligence on an insular country like North Korea.

[131] *Nuclear Posture Review Report*, 8 January 2002. Excerpts from the report can be found at http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm (accessed July 2005), 28.

Aware of these dangers, the Intelligence Community is currently undertaking major reform efforts in the area of HUMINT, as explained in Chapter III. HUMINT is probably the most important type of intelligence needed to adequately assess a rogue nation's nuclear, biological, and chemical capabilities. There is a need for more assets on the ground to infiltrate various adversary organizations, and as stated previously, the Intelligence Community is addressing human intelligence as a significant concern. Although using this type of intelligence will certainly be difficult in the insular country of North Korea, this is the best method to truly assess their capabilities and intentions regarding their nuclear program, and this method might be enhanced further with an engagement strategy for North Korea. The opening up of the North Korea society that should occur by using an engagement strategy offers the distinct possibility of the United States establishing diplomatic relations with the country. If the United States could open a consulate or embassy in Pyongyang, it could give the United States a valuable intelligence resource, and could provide invaluable insights into the inner working of North Korea. Because SIGINT is so important in helping to understand an adversary's intentions and capabilities, SIGINT could certainly benefit from a North Korean engagement strategy. Engagement with North Korea could open up opportunities for signals intelligence to provide better, more accurate analysis. The geospatial intelligence gathered from the NGA could also benefit from an engagement strategy. A more open North Korean society could possibly provide more avenues for imagery to uncover the HDBTs, underground tunnels, and hidden facilities.

D. IMPLICATIONS OF INTELLIGENCE REFORM ON OTHER PROBLEM SETS

Intelligence reforms will not only have implications on the North Korea problem set, but it will have effects on other threats that face the United States. It could be argued that North Korea's nuclear aspirations are also encouraging other nations such as Iran, who is embroiled in its own nuclear controversy with the international community, to attempt to become nuclear powers. The IAEA and the international community have condemned Iran for not being forthcoming about their nuclear program, asking them to suspend all uranium enrichment activities that could possibly lead to fuel for a nuclear

weapon.[132] Although a deal with Britain, Germany, and France was struck in November 2004 to stop enriching uranium, Iran has continued to skirt the regulations and demands set forth by the IAEA and the United Nations. Statements from United States intelligence officials and outside nuclear experts have expressed concern that the Bush administration's diplomatic efforts with European and Asian allies have only minimally decelerated the nuclear weapons programs in Iran and North Korea over the past year, and that both countries have made significant progress on their respective programs.[133]

A nuclear Iran could have the power to threaten other regional states; the threat of Iran selling nuclear weapons and components to terrorist elements looms large over the international community. Iran's president declared in September 2005 that his country will provide nuclear technology to other Muslim states, and European nations immediately renewed an offer of economic incentives if Iran would shut down its uranium enrichment program.[134] Many of the intelligence reforms discussed in this thesis will have some relevance on how the Intelligence Community will better understand not just the DPRK's WMD program, but threats such as Iran's nuclear program as well. Collaboration and intelligence sharing will facilitate better overall awareness of Iran's capabilities and intentions. It is possible that the proposed increases in HUMINT collection assets could also provide the Intelligence Community with enhanced analysis of Iran's activities. These two difficult intelligence challenges are of utmost concern to the senior leadership of the Intelligence Community. DNI Negroponte stated, "These are both states that have got to be watched very carefully, and they are

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[132] Craig S. Smith, "Atomic Agency Votes to Censure Iran Over Its Nuclear Program," *New York Times Online News Service*, 19 September 2004, http://www.nytimes.com/2004/09/19/international/middleeast/19nuke.html?hp (accessed August 2005).

[133] David E. Sanger, "Diplomacy Fails to Slow Advance of Nuclear Arms," New York Times Online News Service, 8 August 2004, http://query.nytimes.com/gst/abstract.html?res=F10D12F63B580C7B8CDDA10894DC404482 (accessed August 2005).

[134] Sam F. Ghattas, "Iran Set to Give Nuclear Info to Others," AP Online News Service, 15 September 2005, http://news.yahoo.com/news?tmpl=story&u= /ap/20050916/ap_on_re_mi_ea/iran_nuclear_7 (accessed September 2005).

extremely high priority…In either instance, left to their own devices they are either going to develop or further develop, as the case may be, their nuclear capabilities."[135]

The intelligence reforms will also have implications for the GWOT, non-proliferation, and counterproliferation efforts. The National Counterterrorism Center created by the Intelligence Reform and Terrorism Prevention Act will be responsible for integrating intelligence on terrorism and counterterrorism, and performing all-source analysis for planning purposes. It will facilitate intelligence sharing and collaboration in order to create comprehensive all-source analysis on terrorist activities, and ensure that intelligence gets to decisionmakers in a timely fashion. It is anticipated that the National Counterproliferation Center will become the location for synergizing current and historical intelligence analysis on suppliers of dangerous unconventional weapons to ensure that WMD is not proliferated to terrorist elements or rogue nations. The NCPC should also be able to help provide information to ensure that friendly forces has the most current intelligence to protected them from enemy WMD efforts. The 2002 National Security Strategy states that the United States will take measures to ensure WMD will not be proliferated. The United States will do this with "proactive counter-proliferation efforts, strengthened nonproliferation efforts to prevent rogue states and terrorists from acquiring the materials, technologies, and expertise necessary for WMD, and effective consequence management to respond to the effects of WMD use, whether by terrorists or hostile states."[136] The NCPC is tasked with accomplishing this undoubtedly challenging mission.

E. CONCLUSION

Given the possibility that North Korea has nuclear weapons with a delivery method that could have the capability to reach the United States, and with their chemical and biological capabilities, it is imperative for the United States to develop a coherent strategy to address the North Korean nuclear issue. An engagement strategy might prove to be the most viable option for the United States to choose. The success of the 1994

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[135] John Diamond, "Intel chief: Iraqis in insurgency more elusive," *USA Today Online Service*, 13 September 2005, http://www.usatoday.com/news/washington/2005-09-12-negroponte_x.htm, 2 (accessed September 2005).

[136] *National Security Strategy 2002*, 12.

Agreed Framework serves as proof that a new engagement policy could help ease North Korea's mistrust of the United States, as well as help build a foundation for cooperation in other policy areas, and promote multiple avenues for reform in North Korea.[137] Engagement with North Korea could also increase intelligence collection opportunities to give decision-makers more accurate information to make better decisions and improve coalition counterproliferation efforts.

A recent visit by Secretary of State Condoleezza Rice to South Korea and China sent a clear message that the United States wants to resolve the situation on the peninsula, and that China must play a larger role in easing the nuclear standoff and bringing North Korea to the six-party talks with meaningful proposals. She also hinted that if six-party talks fail to bring about any concrete resolutions, the United States would have to explore other options to bring an end to the crisis.[138] The most recent round of talks in September 2005 began with no tangible resolutions. North Korea returned to the negotiations insisting on being supplied a light water nuclear reactor, and threatening to increase its weapons production if its demands were not met.[139] An agreement was finally reached between the DPRK and the United States in which North Korea agreed to give up its nuclear weapons in exchange for economic and security considerations, and also return to the non-proliferation treaty. However, the apparent breakthrough in the nuclear standoff is tempered by North Korea's insistence being supplied with light-water reactors for electricity, a point previously rejected by the United States.[140]

Despite this possible breakthrough in the crisis, it is still difficult to predict the intentions of the North Korean regime. An unpredictable North Korea armed with unconventional weapons leads to the possibility of the isolationist country selling nuclear

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[137] Newnham, 175.

[138] Saul Hudson, "U.S. Says It May Need New Ways to Deal with N. Korea," Reuters Online News Service, 21 March 2005, http://www.reuters.com/newsArticle.jhtml?type=topNews&storyID=7958343 (accessed August 2005).

[139] Teruaki Ueno and Jack Kim, "'We have a problem,' US says of N.Korea talks," *Reuters Online News Service*, 15 September 2005, http://news.yahoo.com/s/nm/korea_north_dc (accessed September 2005).

140 "N. Korea warns U.S. not to attack." *AP Online News Service*, 22 September 2005, http://aimpoints.hq.af.mil/display.cfm?id=6730 (accessed September 2005).

weapons or materials to other rogue states or terrorists, or North Korea putting a nuclear weapon on a missile and threatening regional neighbors or even the United States. Equally as devastating would be a preemptive biological or chemical attack against a United States or coalition military installation, causing widespread panic and effectively paralyzing impending military operations. Intelligence plays a large role in determining the nuclear, biological, and chemical capabilities of rogue nations and terrorist entities; if we do not understand the adversary, ultimately we will have difficulty in defeating the adversary. This is inherently a difficult task for intelligence, and there will always be some type of uncertainty when dealing with gathering intelligence. This thesis has detailed how the current transformation and reform efforts occurring in the Intelligence Community should increase the capabilities and cooperation between various intelligence agencies working on uncovering the North Korean unconventional weapons issue. A strategy of engagement with the DPRK could enhance those intelligence capabilities even further.

Unfortunately, there is no guarantee that any of the intelligence reforms outlined in this thesis are the ultimate answer. DNI Negroponte stated in a recent interview that many of the changes occurring within the Intelligence Community will take time and patience. He remarked, "We're talking about something that is a medium and long-term proposition. We're not talking about changes that can necessarily be instituted overnight…[but] we need a single Intelligence Community that cooperates seamlessly, moves quickly, and spends more time thinking about the future than about the past."[141] Time will tell if these changes and reforms are given the chance to take hold. But if intelligence reform is given a legitimate chance to succeed, the capabilities of the Intelligence Community should be enhanced for not just North Korea's unconventional weapons program, but for all the difficult problems that face the United States and its allies in the 21st century.

[141] Diamond, 1.

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